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# THE KELLEY STATISTICAL TABLES Revised 1948

LONDON: GEOFFREY CUMBERLEGE

Oxford University Press

# THE KELLEY STATISTICAL TABLES

### Revised 1948

BY TRUMAN LEE KELLEY
HARVARD UNIVERSITY

Cambridge, Massachusetts
HARVARD UNIVERSITY PRESS
1948

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### PREFACE TO 1938 EDITION

Many years ago my inspiring teacher, Henry Lewis Rietz, observed that statistical procedures derived from the normal distribution were born of a higher realm than other procedures. I disbelieved this with a religious fervor. Though, as time has passed, I have espoused curvilinear regression and skew distributions with gusto, I have found myself frequently slipping, for the data would not support me, and linear relationships and nearly normal distributions have in my experience as a psychologist cropped up with a frequency which has chided and mocked me. reserve judgment as to the place of birth of the normal distribution, but that its sphere of usefulness is extended in connection with biological and psychological phenomena I no longer have the slightest doubt. This constitutes the chief justification for this book and the heavy labor that has been involved in the computation of the deviates and ordinates of the normal distribution.

T. L. K.

Cambridge, Mass. February, 1938

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### PREFACE TO 1948 EDITION

The practice of providing tabled entries to eight figures has been continued, but sundry improvements have been made to assure an actual utility to eight figures.

The normal distribution functions provided in the first edition have been supplemented by the addition at the feet of columns of  $E^{\dagger\dagger}$  and  $E^{\dagger\dagger\dagger}$  values, which indicate the maximum interpolation error for the region in question when linear and quadric interpolation are employed.

Precise results from tables having sufficient decimal places in the tabled values, whatever the tabled function, can in general be obtained by (a) linear interpolation in a table having arguments at small intervals, or by (b) quadric, cubic, or higher-order interpolation in a table with coarse argument intervals. In favor of (a) is ease of use and against it is cost of construction and bulk of a table having arguments at small intervals. In favor of (b) is low cost and small bulk and against it is the greater labor of interpolation of higher order than linear. Some compromise between (a) and (b) has always been necessary. The (b) procedure is greatly simplified if tables of Lagrangian interpolation coefficients are available. The first edition tables of interpolation coefficients for direct interpolation are here replaced by more detailed tables, and inverse three- and four-point interpolation is described. These tables constitute generally useful devices in connection with tables of all sorts where precision greater than that given by linear interpolation is demanded. In general, the use of direct interpolation coefficients as here tabled in connection with a 3 × 8 table (3-place arguments and 8-place consequents) will be more accurate than linear interpolation in a 5 X 8 table, which is, of course, 100 times as bulky.

A statistic of universal importance is P, the probability of a situation, deviating from the hypothesis as much as does the observed situation, arising as a matter of chance. The calculation of P depends upon the form of the distribution yielded by chance. It has long been known that a large number of chance distributions have the normal form and it has been

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more recently established that many other chance distributions fall in the class of variance ratio, or F, distributions. To table the common F-distributions with the refinement in which the normal distribution has been tabled is prohibitive, but happily a transformation is available which normalizes F-distributions so that the detailed table of the normal distribution may be used to get highly precise (i.e., to the third decimal place) P values from F. The most involved step in this meritorious transformation is the extraction of a cube root. A complete  $3 \times 8$  table of cube roots is given herein.

The variety of occasions in which natural logarithms are needed is served by an 8-place table for arguments from 1.00 to 10.00.

The chief objectives of this work are: (1) To provide certain 8-place tables of general utility, but not duplicating the operations readily handled upon a computing machine, (2) to provide interpolation coefficients which enable the ready use of tables with a precision approximating the maximum precision inherent in the tabled entries, (3) to provide a detailed table of the normal distribution, and (4) to provide tables and transformation equations enabling the use of the fully tabled normal distribution to evaluate the areas in t (Student's t), z (Fisher's z from r),  $\lambda^2$  (Pearson's), and F (variance ratio) distributions.

Truman Lee Kelley

Cambridge, Massachusetts January, 1948



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# THE KELLEY STATISTICAL TABLES Revised 1948

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### THE KELLEY STATISTICAL TABLES Revised 1948

## INTRODUCTORY SECTION: BEARING UPON ALL THE TABLES AND INCLUDING INVERSE INTERPOLATION PROCEDURES

The need of a table of deviates and ordinates corresponding to proportionate tail areas of a normal distribution was met in part by the Kelley-Wood Table\* and Table I of The Kelley Statistical Tables (1938). Table I herewith is Table I of the 1938 edition, with the addition throughout of maximum inverse two-point and direct two- and three-point interpolation errors.

The  $\sqrt{pq}$ ,  $\sqrt{1-p^2}$ , and  $\sqrt{1-q^2}$  columns of Table I have been incorporated for good measure. These square roots are commonly needed in probability and correlation work, and since the arguments, values from .0000 to 1.0000 by .0001's were available, it seemed a happy opportunity to use them. Of course, the labor cost of these columns has been but a trifle in comparison with that of the deviate and ordinate columns.

Table VI gives probability values for different values of  $\chi^2$  and different d.o.f. (degrees of freedom). The argument  $\chi / \sqrt{n}$  has been chosen as it yields a convenient spacing of values for interpolation purposes, especially when the number of d.o.f., n, is large. An alternative method for obtaining P from  $\chi^2$  is that for getting P from F, a variance ratio, for  $\chi^2$  with n d.o.f. is an  $F_{n\infty}$ . Table VI yields an answer expeditiously, but when interpolation is necessary it generally is not quite as accurate as the P from F method described in Section VIII.

Tables II, III, IV, and V provide Lagrangian interpolation coefficients, which the writer believes will generally be found to be more simple to use than first, second, third, fourth, fifth, or sixth order differences, even when these are published. When not published and when a computing machine is available, the economy of this method of interpolation over Everett's, or any other higher order difference formula, is great.

INVERSE INTERPOLATION: The numerical values for the maximal inverse two- and three-point interpolation errors of argument columns, are based upon the following method of inverse inter-

<sup>\*</sup> Truman L. Kelley, STATISTICAL METHOD, 1923.

polation:

Let four consecutive equally spaced arguments with interval i be  $a_{-1}$ ,  $a_0$ ,  $a_1$ ,  $a_2$  and let the tabled values and differences be as indicated in Table A herewith.

TABLE A. ARGUMENT, CONSEQUENT, AND DIFFERENCE NOTATION

| ARGUMENTS   | <b>CON SEQUENTS</b> |                           | DIFFERENCES        |                    |
|-------------|---------------------|---------------------------|--------------------|--------------------|
| <b>a</b> _1 | $t_{-1}$            |                           |                    |                    |
|             |                     | Δ,1                       |                    |                    |
| <b>a</b> _0 | t <sub>o</sub>      |                           | $\Delta_{-1}^{II}$ |                    |
|             |                     | $\Delta_{0}^{\mathbf{I}}$ |                    | Δ <sub>-1</sub> rr |
| <b>a</b> 1  | $t_1$               | •                         | $\Delta_0^{TI}$    | <b>-</b> 1         |
|             |                     | $\Delta_1^{\mathbf{I}}$   |                    |                    |
| <b>a</b> 2  | $t_2$               | -                         |                    |                    |

Corresponding to a is a value of the function t. a is some proportionate distance p between  $a_0$  and  $a_1$  and t is some proportionate distance p' between  $t_0$  and  $t_1$ . The problem of inverse interpolation is to find p knowing p'. The linear approximation to p is designated  $p^{-1}$ , the quadric  $p^{-1}$ , and the cubic  $p^{-1}$ . The simplest solution maintains when a is a linear function of t, for then  $p^{-1} = p'$  and a is given by [1]. We let  $p' = (t - t_0) / \Delta_0^T$  and the value of a as given by inverse two-point interpolation, designated  $a^{-1}$  is

Though [1] is axiomatic we derive it herewith to illustrate the principles followed in obtaining more complex inverse interpolation formulas. The general expression of a as a linear function of t is  $a^{-1} = k + b$  t. Imposing the condition that this straight line pass through the two points  $(a_0, t_0)$  and  $(a_1, t_1)$ , we have

$$a_0 = k + b t_0$$
 and  $a_1 = k + b t_1$ 

from which, since  $i = a_1 - a_0$ , we obtain  $k = a_0 - \frac{it_0}{\Delta_0^{\text{I}}}$  and  $b = \frac{i}{\Delta_0^{\text{I}}}$ , thus giving equation [1].

We can in a comparable manner pass a quadric through the three points  $(a_0, t_0)$ ,  $(a_1, t_1)$ ,  $(a_2, t_2)$ . It proves convenient for three- and four-point interpolation to write t in terms of  $\Delta_0^{\text{I}}$  and to make other substitutions as follows:

$$p' = \frac{t-t_0}{\Delta_0^{\mathrm{T}}}; \qquad T_0 = \frac{t_0-t_0}{\Delta_0^{\mathrm{T}}} = 0; \qquad T_1 = \frac{t_1-t_0}{\Delta_0^{\mathrm{T}}} = 1;$$

$$T_2 = \frac{t_2 - t_0}{\Delta_0^{\text{I}}} = 2 + \Delta, \text{ in which } \Delta \text{ is a small quantity if a deviates but slightly from being a linear function of } t$$

Otherwise expressed,

$$\Delta = \frac{\Delta_0^{\text{rr}}}{\Delta_0^{\text{r}}} \quad \dots \quad \dots \quad [2]$$

$$T_{-1} = \frac{t_{-1} - t_0}{\Delta_0^{\rm T}} = -1 + \Delta - 3\Delta^2 + \delta,$$
 in which  $\delta$  is a small quantity if  $a$  deviates but slightly from being a quadric function of  $t$ . Also  $\Delta^2$  is ordinarily small with reference to  $\Delta$ 

Otherwise expressed, 
$$\delta = \frac{-\Delta_{-1}^{\text{III}}}{\Delta_{0}^{\text{I}}} + 3\Delta^{2} \quad . \quad . \quad . \quad . \quad . \quad [3]$$

Passing the quadric  $a^{-1} = k + bT + cT^2$  through the three points  $(a_0, T_0)$ ,  $(a_1, T_1)$ ,  $(a_2, T_2)$  permits solving for k, b, and c and obtaining equation [4], wherein q' = 1-p'. We first obtain  $p^{-1}$ :

$$p^{-111} = p' + \frac{\Delta}{2 + 3\Delta + \Delta^2} p'q'$$

$$a^{-111} = a_0 + ip' + i \frac{\Delta p'q'}{2 + 3\Delta + \Delta^2}$$

or approximately

$$a^{-111} = a_0 + ip' + \frac{1}{2}i\Delta p'q'(1 - \frac{3\Delta}{2})$$
 Inverse 3-point interpolation (.5 < p' < 1.0) [4]

If p' is greater than .5 the tabled values to use are  $t_0$ ,  $t_1$ , and  $t_2$ , while if less than .5 interpolate in the opposite direction using  $t_1$ ,  $t_0$ , and  $t_{-1}$ .

A close approximation to the error in the linear inverse interpolation answer [1] is

The maximum error is found when p' = .5. We designate the absolute value of this maximum error in linear or two-point inverse interpolation  $E^{-11}$  and have recorded it in connection with the principal arguments of this book of tables.

Following the principles of derivation involved in [4], [5],

and [6] yields formula [7] for inverse four-point interpolation, formula [8] for the error in inverse three-point interpolation, and formula [9] for the maximal error.

$$a^{-1} = a_0 + ip' + ip'q'(\frac{1}{2}\Delta - \frac{3}{4}\Delta^2) + ip'q'(1+q')\frac{\delta}{6} \qquad . . . . . [7]$$

$$e^{-111} = a^{-1} \cdot - a^{-111} = \frac{p'q'(1+q')}{6} \delta$$
(Holding when terms of order  $\Delta^3$ ,  $\Delta \delta$ ,  $\delta^2$ , etc., are neglitible. [8]

$$E^{-111} = .0625 \ i \ |\delta|$$
 Maximum 3-point inverse interpolation error [9]

Attention is called to the italicized rules given in Section I covering the inverse interpolation error consequent to the rounding-off error in tabled entries.

More precise methods of high order inverse interpolation than here given are presented in Davis\* and Salzer.

Formulas for three-, four-, five-, six-, and seven-point interpolation are given by Salzer. The first three of them are given herewith in the notation of this treatment. Quantities r, s, t, and u, defined by the following equations, and differing in their definitions depending upon the number of interpolation points used, are introduced in formula [21] to yield the desired inverse interpolated value.

Let 
$$\frac{1}{d_3} = t_1 - t_{-1}$$

Let 
$$\frac{1}{d_4} = -t_2 + 6t_1 - 3t_0 - 2t_{-1}$$

Let 
$$\frac{1}{d_5} = -2t_2 + 16t_1 - 16t_{-1} - 2t_{-2}$$

Then r, s, t, and u are defined as follows:

For three-point inverse interpolation, -

$$t = u = 0 \dots [12]$$

\*H. T. Davis, TABLES OF THE HIGHER MATHEMATICAL FUNCTIONS, Vol. 1, 1933-1935, pages 80-83.

Herbert E. Salzer, "Tables of the Coefficients for inverse interpolation with Central Differences," JOURNAL MATHEMATICS AND PHYSICS, Vol. 22, No. 4, December, 1943, pages 210-224.

"A New Formula for inverse interpolation," BULLETIN AMERICAN MATHEMATICAL SOCIETY, vol. 50, No. 8, August, 1944, pages 513-516.

TABLE I

7

For four-point inverse interpolation, -

When, for any order of inverse interpolation, the values of r, s, t, and u are introduced into [21] the desired proportionate distance p is obtained.

$$p = r - r^{2}s + r^{3}(2s^{2} - t) + r^{4}(-5s^{3} + 5st + u)$$

$$+ r^{5}(14s^{4} - 21s^{2}t + 3t^{2} + 6su)$$

$$+ r^{6}(-42s^{5} + 84s^{3}t - 28st^{2} - 28s^{2}u + 7tu) + \dots$$
[21]

It will be noted that when this formula is used to get several values between the same  $t_0$  and  $t_1$  the only change in variable in the right hand member is in r.

### SECTION I. BEARING UPON TABLE I.

The early standard tables of normal distribution functions\* used the deviate as the argument and an area as the consequent, or tabled measure. Table I herewith interchanges these. It is based on a unit normal distribution which is defined by the equation

$$z = \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}}$$

and the integral  $p=\int\limits_{-\infty}^{\infty}z\;dx$ \*James Burgess, "On the Definite Integral  $\frac{2}{\pi}\int\limits_{0}^{t}e^{-t^{2}}d\;t$  with Extended Tables of Values, TRANS. ROYAL SOCIETY OF EDINBURGH, Vol. 39, Part 2, 1897-1898, pp. 257-321.

Karl Pearson, TABLES FOR BIOMETRICIANS AND STATISTICIANS, 1914 (in which are included Sheppard's Tables).

This unit normal distribution has an area of 1.00, a mean of zero, and a standard deviation of 1.00. The computation of z for a given value of x is relatively simple, but the computation of x for a given value of p is laborious. Many methods were tried and that finally adopted involved the following steps:

- (a) Interpolation using higher order differences in Kondo and Elderton's table\*. Differences as high as the twelfth order were tried but they proved uneconomical, so that, generally speaking, differences beyond the fifth were not used in this step.
- (b) Refinement of values thus obtained by computation, using formula [23], of all values which were marginal, that is, in the neighborhood of 50 in the ninth and tenth decimal places, since it has been the aim to have the table accurate to the last published figure. For values of p near .5000 few recomputations were necessary, but for values of p above .9700 from 20 to 50 per cent of recomputation was needed. As a check on the accuracy of interpolation, the intervals used overlapped so that two values of x were obtained, the difference between them giving the order of accuracy of the interpolation method employed. Also, to test this accuracy, the high order interpolation error formulas tof Sections II-V were employed. The interpolated values were computed on a Moon-Hopkins machine, printing the last nine figures (decimal places six to fourteen inclusive) and guaranteeing accuracy, as each subsequent term depended upon those preceding. The first five decimal places, which change but little, were computed mentally. It is believed that if an inaccuracy is present in the last published figure, it is only of size consequent to a carry-over from the eleventh or higher decimal place.
- (c) Occasional computation by Schlömilch's formula [22]. This formula proved of limited use because it is only serviceable for a few values at the upper end of the table.
- (d) Computation by formula [23] of certain intermediate values; for example, values for p ending in 5 in the fourth decimal place, and then the use of these together with Kondo and Elderton values to get interpolated values.
- (e) More precise computation for p > .9950, using Laplace's continued fractions  $\ddagger$  and quadric inverse interpolation.

**≛**Burgess, op. cit.

<sup>\*</sup>T. Kondo and E. M. Elderton, "Abscissae, Ordinates, and Ratios,  $z/\pm(1\pm\alpha)$ ,  $\pm(1\pm\alpha)/z$ , to Ten Significant Figures of the Normal Curve to Each Permille of Frequency," BIOMETRIKA, Vol. 22, 1930-1931. pages 368-376.

TEdward V. Huntington, "Tables of Lagrangian Coefficients for Interpolating Without Differences," PROCEEDINGS AMERICAN ACADEMY OF ARTS AND SCIENCES, Vol. 63, No. 11, March, 1929.

TE. R. Enlow, "Quadrature of the Normal Curve," ANNALS UF MATHEMATICAL STATISTICS, Vol. 5, June, 1934, pages 136-146.

$$p = \frac{1}{2} + \frac{1}{2} \left\{ 1 - \frac{2e^{-\frac{x^2}{2}}}{x\sqrt{2\pi}} \left[ 1 - \frac{1}{x^2 + 2} + \frac{1}{(x^2 + 2)(x^2 + 4)} \right] - \frac{5}{(x^2 + 2)(x^2 + 4)(x^2 + 6)} + \frac{9}{(x^2 + 2)(x^2 + 4)(x^2 + 6)(x^2 + 8)} - \frac{129}{(x^2 + 2)(x^2 + 4)(x^2 + 6)(x^2 + 8)(x^2 + 10)} + \frac{57}{(x^2 + 2)(x^2 + 4) \cdot \dots \cdot (x^2 + 12)} \right\} [22]$$

FORMULA GIVING AREAS FROM  $-\infty$  TO X UNDER A UNIT NORMAL DISTRIBUTION

$$p = \int_{-\infty}^{x} \frac{1}{\sqrt{2\pi}} e^{\frac{-x^2}{2}} dx$$

$$P = \frac{1}{2} + x(.39894, 22804, 014) \left[1 - \frac{1}{6}x^2 + \frac{P}{6.66666, 66666, 67}x^2 - \frac{P}{8.4}x^2\right]$$

$$+ \frac{P}{10.28571, 42857, 1}x^2 - \frac{P}{12.22222, 22222, 2}x^2 + \frac{P}{14.18181, 81818, 2}x^2$$

$$- \frac{P}{16.15384, 61538, 5}x^2 + \frac{P}{18.13333, 33333, 3}x^2 - \frac{P}{20, 11764, 70588, 2}x^2$$

$$+ \frac{P}{22.10526, 31578, 9}x^2 - \frac{P}{24, 09523, 80952, 4}x^2 + \frac{P}{26.08695, 65217, 4}x^2$$

$$- \frac{P}{28.08000, 00000, 0}x^2 + \frac{P}{30.07407, 40740, 7}x^2 - \frac{P}{32.06896, 55172, 4}x^2$$

$$+ \frac{P}{40.05405, 40540, 5}x^2 + \frac{P}{42, 05128, 20512, 8}x^2 - \frac{P}{44, 04878, 04878, 0}x^2$$

$$+ \frac{P}{46.04651, 16279, 1}x^2 - \frac{P}{48, 04444, 44444, 4}x^2 + \frac{P}{50.04255, 3191}x^2$$

$$- \frac{P}{52.04081, 6326}x^2 + \frac{P}{54, 03921, 5686}x^2 - \frac{P}{56, 03773, 5849}x^2$$

$$+ \frac{P}{58.03636}x^2 - \frac{P}{60.03509}x^2 + \frac{P}{62.03}x^2 + \text{etc.} \right] [23]$$

P is not a constant. It is, in any term, the absolute value of the immediately preceding term.

The size of the interval in Kondo and Elderton's table is ten times that of Table I herewith.

It is possible to determine differences for small intervals,

knowing them for large intervals, if it is sound to take differences of certain high order as equal to zero. If  $\delta^I$ ,  $\delta^{II}$ ,  $\delta^{III}$ , et cetera, are the first, second, third, et cetera, differences for intervals j times that for which the differences are  $\Delta^I$ ,  $\Delta^{II}$ ,  $\Delta^{III}$ , et cetera, we can express the  $\delta$ 's in terms of the  $\Delta$ 's. The following formulas give the relationships and in these  $C_a^I$  is the number of the combinations of j things a at a time. In each of these formulas the form is obvious so they may be terminated with any term desired.

$$\delta^{I} = C_{1}^{j} \Delta^{I} + C_{2}^{j} \Delta^{II} + C_{3}^{j} \Delta^{III} + C_{4}^{j} \Delta^{IV} + \text{etc.} \qquad (24)$$

$$\delta^{\text{II}} = (C_2^{2j} - 2C_2^j) \Delta^{\text{II}} + (C_3^{2j} - 2C_3^j) \Delta^{\text{III}} + (C_4^{2j} - 2C_4^{2j}) \Delta^{\text{IV}} + \text{etc.} \quad [25]$$

$$\delta^{\text{III}} = (C_3^{3j} - 3C_3^{2j} + 3C_3^{j})\Delta^{\text{III}} + (C_4^{3j} - 3C_4^{2j} + 3C_4^{j})\Delta^{\text{IY}} + (C_5^{3j} - 3C_5^{2j} + 3C_5^{j})\Delta^{\text{Y}} + \text{etc.} \qquad (26)$$

$$\delta^{IY} = (C_{4}^{4j} - 4C_{4}^{3j} + 6C_{4}^{2j} - 4C_{4}^{j})\Delta^{IY} + (C_{5}^{4j} - 4C_{5}^{3j} + 6C_{5}^{2j} - 4C_{5}^{j})\Delta^{Y} + (C_{6}^{4j} - 4C_{6}^{3j} + 6C_{6}^{2j} - 4C_{5}^{j})\Delta^{YI} + \text{etc.} \qquad (27)$$

$$\delta^{Y} = (C_{5}^{5j} - 5C_{5}^{4j} + 10C_{5}^{3j} - 10C_{5}^{2j} + 5C_{5}^{j})\Delta^{Y}$$

$$+ (C_{6}^{5j} - 5C_{6}^{4j} + 10C_{6}^{3j} - 10C_{6}^{2j} + 5C_{6}^{j})\Delta^{YI}$$

$$+ (C_{7}^{5j} - 5C_{7}^{4j} + 10C_{7}^{3j} - 10C_{7}^{2j} + 5C_{7}^{j})\Delta^{YII} + \text{etc.} . . . [28]$$

$$\delta^{\text{YI}} = (C_6^{6j} - 6C_6^{5j} + 15C_6^{4j} - 20C_6^{3j} + 15C_6^{2j} - 6C_6^{j})\Delta^{\text{YI}}$$

$$+ (C_7^{6j} - 6C_7^{5j} + 15C_7^{4j} - 20C_7^{3j} + 15C_7^{2j} - 6C_7^{j})\Delta^{\text{YII}}$$

$$+ (C_8^{6j} - 6C_8^{5j} + 15C_8^{4j} - 20C_8^{3j} + 15C_8^{2j} - 6C_8^{j})\Delta^{\text{YIII}} + \text{etc.} [29]$$

$$\delta^{\text{VII}} = (C_{7}^{7j} - 7C_{7}^{6j} + 2 C_{7}^{5j} - 3 5C_{7}^{4j} + 35C_{7}^{3j} - 2 C_{7}^{2j} + 7C_{7}^{j}) \triangle^{\text{VII}} + (C_{8}^{7j} - 7C_{8}^{6j} + 2 C_{8}^{5j} - 35C_{8}^{4j} + 35C_{8}^{3j} - 2 C_{8}^{2j} + 7C_{8}^{j}) \triangle^{\text{VII}} + \text{etc.} [30]$$

$$\delta^{\text{YIII}} = (C_8^8 \text{ }^{\text{j}} - 8C_8^7 \text{ }^{\text{j}} + 28C_8^6 \text{ }^{\text{j}} - 56C_8^5 \text{ }^{\text{j}} + 70C_8^4 \text{ }^{\text{j}} - 56C_8^9 \text{ }^{\text{j}} + 28C_8^2 \text{ }^{\text{j}} - 8C_8^3) \Delta^{\text{VIII}} + \text{ etc. } [31]$$

If we now let j be fractional and write  $i = \frac{1}{j}$  and substitute in these formulas, we obtain, after considerable algebraic expansion

and simplification, the following formulas giving  $\delta$ 's for small intervals, knowing  $\Delta$ 's for intervals i times as large. The formulas as written assume that  $\Delta$ 's of ninth and higher order are negligibly small. The subscript zero attaching to each has been omitted.

$$\delta^{I} = \frac{\Delta^{I}}{i} - \frac{1}{2i^{2}}(i-1)\Delta^{II} + \frac{1}{3! i^{3}}(i-1)(2i-1)\Delta^{III}$$

$$- \frac{1}{4! i^{4}}(i-1)(2i-1)(3i-1)\Delta^{IV}$$

$$+ \frac{1}{5! i^{5}}(i-1)(2i-1)(3i-1)(4i-1)\Delta^{V}$$

$$- \frac{1}{6! i^{6}}(i-1)(2i-1)(3i-1)(4i-1)(5i-1)\Delta^{VI}$$

$$+ \frac{1}{7! i^{7}}(i-1)(2i-1)(3i-1)(4i-1)(5i-1)(6i-1)\Delta^{VII}$$

$$- \frac{1}{8! i^{8}}(i-1)(2i-1)(3i-1)(4i-1)(5i-1)(6i-1)\Delta^{VIII}$$

$$\delta^{\text{II}} = \frac{1}{i^2} \Delta^{\text{II}} - \frac{(i-1)}{i^3} \Delta^{\text{III}} + \frac{1}{12i^4} (i-1) (11i-7) \Delta^{\text{IV}}$$

$$- \frac{1}{12i^5} (i-1) (2i-1) (5i-3) \Delta^{\text{V}}$$

$$+ \frac{2}{6!i^6} (i-1) (2i-1) (137i^2 - 132i + 31) \Delta^{\text{VI}}$$

$$+ \frac{1}{5!i^7} (i-1) (2i-1)^2 (3i-1) (7i-3) \Delta^{\text{VII}}$$

$$+ \frac{1}{7!4i^8} (i-1) (2i-1) (3i-1) (2178i^3 - 2573i^2 + 1002i - 127) \Delta^{\text{VIII}}$$
 [33]

$$\delta^{\text{III}} = \frac{1}{i^{3}} \Delta^{\text{III}} - \frac{3}{2i^{4}} (i-1) \Delta^{\text{IV}} + \frac{1}{4i^{5}} (i-1) (7i-5) \Delta^{\text{V}}$$

$$- \frac{1}{8i^{6}} (i-1) (3i-2) (5i-3) \Delta^{\text{VI}}$$

$$+ \frac{1}{5! i^{7}} (i-1) (2i-1) (116i^{2} - 141i + 43) \Delta^{\text{VII}}$$

$$- \frac{1}{5! 4i^{8}} (i-1) (7i-3) (2i-1) (67i^{2} - 78i + 23) \Delta^{\text{VIII}}$$
[34]

$$\delta^{IY} = \frac{1}{i^4} \Delta^{IY} - \frac{2}{i^5} (i-1) \Delta^{Y} + \frac{1}{6i^6} (i-1) (17i-13) \Delta^{YI}$$

$$- \frac{1}{6i^7} (i-1) (3i-2) (7i-5) \Delta^{YII}$$

$$+ \frac{1}{5! 2i^8} (i-1) (967i^3 - 1833i^2 + 1157i - 243) \Delta^{YIII}$$
 [35]

$$\delta^{\Psi} = \frac{1}{i^{5}} \Delta^{\Psi} - \frac{5}{2i^{6}} (i-1) \Delta^{\Psi I} + \frac{1}{6i^{7}} 5(i-1) (5i-4) \Delta^{\Psi II} - \frac{5}{4! i^{8}} (i-1) (4i-3) (7i-5) \Delta^{\Psi III} \qquad (36)$$

$$\delta^{VI} = \frac{1}{i^6} \Delta^{VI} - \frac{3(i-1)}{i^7} \Delta^{VII} + \frac{1}{4i^8} (i-1)(23i-19) \Delta^{VIII} \quad . \quad . \quad . \quad [37]$$

$$\delta^{\text{VII}} = \frac{\Delta^{\text{VII}}}{i^7} + \frac{-7}{2i^8}(i-1)\Delta^{\text{VIII}} \qquad (i-1)\Delta^{\text{VIII}} \qquad (38)$$

In these formulas  $\delta^{I}$ ,  $\delta^{II}$ ,  $\delta^{III}$ , etc., are the first, second, third, etc., differences for the small interval, and  $\Delta^{\text{I}}$  ,  $\Delta^{\text{II}}$  ,  $\Delta^{\text{III}}$ , etc., the differences for intervals i times as large. As employed, i was usually 10, occasionally 5, and for a short stretch 2.5. When for the upper portion of the table this last interval proved too large, an interpolation method was no longer followed and each successive value computed by formula [23], this finally requiring for the higher values some thirty 15-decimalplace terms for each successive approximation. The number of such approximations to get a single value varied from two or three to ten or twelve, dependent upon the excellence of the initial starting value and upon sundry vicissitudes of computation. The first computations in such successive approximations were made upon a ten-bank Monroe machine with a cumulator dial, thus obviating the labor and chance for error due to copying. And later computations were made upon a thirteen-bank Monroe, and still later ones on this thirteen-bank machine so supplemented by slide rule as to give fifteen-place accuracy. This extended computation was found to be necessary in view of the rapid change in x corresponding to a change in p.

The  $\sqrt{pq}$ ,  $\sqrt{1-p^2}$ , and  $\sqrt{1-q^2}$  columns offered little dif-

TABLE I

13

ficulty of computation.

The uses of Table I are so numerous and they will be so obvious to statistical workers that illustrations in the main are superfluous. We will, however, note procedures involving inverse interpolation and the accuracy of direct interpolation of high parabolic degree.

If the proportion, p, to the left of the point of dichotomy, x, of a normal distribution is desired, the x column becomes the argument and the p column the consequent. For example, let p be desired for x = .6. By linear inverse interpolation we have

$$p' = \frac{.6000\ 0000\ -\ .5998\ 5931}{.6001\ 5941\ -\ .5998\ 5931} = \frac{.0001\ 4069}{.0003\ 0010} = .4688\ 104$$

Since the fifth significant figure, namely 9, of the dividend is subject to a rounding-off error, the quotient is subject to such an error in the fifth significant figure and no method of interpolation can produce a result not subject to this rounding-off error in the fifth significant figure of p', which corresponds to the ninth decimal place in a. We thus have

$$a^{-11} = a_0 + ip' = .7257 + .0000 4688 1 = .7257 4688 1$$

with a maximal error as given by [6] and recorded at the foot of column p of .0000 0000 2.

We find i = .0001 and  $\Delta$ , given by [2], = -.0002 00, so three-point inverse interpolation by [4] yields

$$a^{-111} = .7257 \ 4688 \ 1 + .5(-.0001)(-.0002 \ 00)(.4688 \ 1)(.5311 \ 9)(1.0003 \ 00)$$
  
= .7257 \ 4688 \ 3

Since the rounding-off error in the tabled measures (eighth decimal place) carried over to an error in the fifth significant figure in p', that is to the ninth decimal place in a, the error in  $a^{-111}$  is in this ninth decimal place in spite of  $E^{-111}$ , as given by [9], indicating an error of but .0000 0000 02. We may write the rules:

In connection with  $a^{-1}$  whichever of the two errors, (1) that deriving from the rounding-off error in the original tabled values, or (2) that given by [6], is the greater is the error to be attached to  $a^{-1}$ .

In connection with  $a^{-1}$  whichever of the two errors, (1) that deriving from the rounding-off error in the original tabled values, or (2) that given by [9], is the greater is the error to be attached to  $a^{-1}$ .

The accuracy of direct interpolation of any order may be determined by computing  $E^{11}$ ,  $E^{111}$ , etc., as given in Table C, but in no case can the accuracy exceed that of the basic tabled entries, which may have an error as great as  $\frac{1}{2}$  in the last figure. For practical purposes, if an interpolation procedure yields an answer with a maximal error not greater than 1 in the place given by the last published figure in the table, it may be considered entirely adequate.

We designate direct two-, three-, etc., point interpolation errors  $e^{\dagger i}$ ,  $e^{\dagger i}$ , etc., and designate their maximal values  $E^{\dagger i}$ ,  $E^{\dagger i}$ , etc. The formulas of Table C have been used to compute the maximal errors recorded at the feet of the columns of Table I. Where a single  $E^{\dagger i}$ , or  $E^{\dagger i}$ , value is recorded it applies specifically to the region near the middle of the column, i.e., the region half-way down the page.

A scanning of the upper bounds of error,  $E^{11}$ , shows that when p is the argument the error in x is less than 2 in the last, or eighth decimal place of the table for the region p < .8; that it is less than 2 in the seventh decimal place for p < .95; etc.

Three-point interpolation yields an x accurate to within 2 in the eighth decimal place for the region p < .99.

In the extreme tail region, when p = .99935, eight point interpolation yields an x answer in which the upper bound of error is 2 in the sixth decimal place.

The inverse error bounds that are recorded,  $E^{-11}$  and  $E^{-111}$ , apply when x is the argument and p or q is the consequent. Linear inverse interpolation yields a p which is correct to within 2 in the ninth decimal place for x < .50 and to within 2 in the eighth place for x < 1.75, and three-point inverse interpolation yields a p correct to within 2 in the eighth place for x < 2.9.

Many uses of the functions tabled in columns 4-6 will be obvious to the statistician. A number of unusual uses, not served by other tables, may arise; for example, if the sine of an angle corresponding to a given cosine is desired, this important relationship for four-decimal-place arguments is immediately given in the pairs of columns, p and  $\sqrt{1-p^2}$  and q and  $\sqrt{1-q^2}$ . If p or q is the value of a correlation coefficient,  $\sqrt{1-p^2}$  and  $\sqrt{1-q^2}$  are the corresponding alienation coefficients. The function  $\sqrt{1-r^2}$  so universally needed in simple and multiple correlation work, is provided in the  $\sqrt{1-p^2}$  and  $\sqrt{1-q^2}$  entries. The common functions  $\sqrt{Npq}$  and  $\sqrt{pq/N}$  are readily gotten since Table I provides pq and Table VII provides  $\sqrt{N}$ .

SECTION II-V: BEARING UPON TABLES II, III, IV, AND V Giving three-, four-, six-, and eight-point interpolation coefficients

The equations of parabolas which pass through one, two, three, . . . nine tabled values which pertain to equally spaced arguments are given in Table B.

#### TABLE B

FORMULAS FOR PARABOLIC INTERPOLATION OF O, 1, 2, 3, 4, 5, 6, 7, 8 DEGREES

$$t^{\dagger\dagger} = (1-p)t_0 + pt_1 \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot (\text{Two-point interpolation})$$
 [41]

$$t^{\text{iii}} = p(1-p^2) \left[ \frac{-1}{2(1+p)} t_{-1} + \frac{1}{p} t_0 + \frac{1}{2(1-p)} t_1 \right] \qquad \text{(Three-point interpolation)}$$
 [42]

$$t^{\dagger v} = \frac{1}{6}p(1-p^2)(2-p)\left[-\frac{1}{1+p}t_{-1} + \frac{3}{p}t_0 + \frac{3}{1-p}t_1 - \frac{1}{2-p}t_2\right] \quad . \quad . \quad . \quad [43]$$

$$t^{\nu} = \frac{1}{24} p(1-p^2) (4-p^2) \left[ \frac{1}{2+p} t_{-2} - \frac{4}{1+p} t_{-1} + \frac{6}{p} t_0 + \frac{4}{1-p} t_1 - \frac{1}{2-p} t_2 \right]$$
 [44]

$$t^{v\dagger} = \frac{1}{120} p(1-p^2)(4-p^2)(3-p) \left[ \frac{1}{2+p} t_{-2} - \frac{5}{1+p} t_{-1} + \frac{10}{p} t_0 + \frac{10}{1-p} t_1 - \frac{5}{2-p} t_2 + \frac{1}{3-p} t_3 \right] \dots \dots (45)$$

$$t^{v+1} = \frac{1}{720} p(1-p^2) (4-p^2) (9-p^2) \left[ -\frac{1}{3+p} t_{-3} + \frac{6}{2+p} t_{-2} - \frac{15}{1+p} t_{-1} + \frac{20}{p} t_0 + \frac{15}{1-p} t_1 - \frac{6}{2-p} t_2 + \frac{1}{3-p} t_3 \right] \dots \dots (46)$$

$$t^{v_{1+1}} = \frac{1}{5040} p(1-p^2)(4-p^2)(9-p^2)(4-p) \left[ -\frac{1}{3+p}t_{-3} + \frac{7}{2+p}t_{-2} -\frac{21}{1+p}t_{-1} + \frac{35}{p}t_0 + \frac{35}{1-p}t_1 - \frac{21}{2-p}t_2 + \frac{7}{3-p}t_3 - \frac{1}{4-p}t_4 \right]$$
[47]

$$t^{1 \times} = \frac{1}{40320} p(1-p^2)(4-p^2)(9-p^2)(16-p^2) \left[ \frac{1}{4+p} t_{-4} - \frac{8}{3+p} t_{-3} \right]$$

$$+ \frac{28}{2+p} t_{-2} - \frac{56}{1+p} t_{-1} + \frac{70}{p} t_0 + \frac{56}{1-p} t_1 - \frac{28}{2-p} t_2$$

$$+ \frac{8}{3-p} t_3 - \frac{1}{4-p} t_4 \right] \qquad \text{(Nine-point interpolation)} \qquad [48]$$

In each instance the value sought is that between  $t_0$  and  $t_1$  which corresponds to an argument p proportion of the distance from  $a_0$  to  $a_1$ . When this value is determined from the two neighboring points it is designated  $t^{ii}$ , when from the three nearest points  $t^{iii}$ , when from the nearest four  $t^{iv}$ , etc. The solutions,  $t^{i}$ ,  $t^{iii}$ ,  $t^{iii}$ , etc., are succeedingly better and better estimates of the true value of t which corresponds to the argument  $a_0 + ip$  (in which i is the size of the interval, i.e.,  $i = a_1 - a_0 = a_0 - a_{-1} = a_2 - a_1 = \text{etc.}$ ).

Linear interpolation by equation [41] calls for such simple functions of p that there is no need of tabling them, but tabling the analogous coefficients when a larger number of interpolation points are used is a time saving device. Equations [42] to [48] are Lagrangian formulas for three-point (quadric) to nine-point (octic) interpolation. For the three-point interpolation coefficients the  $c_{-1}$ ,  $c_0$ ,  $c_1$  quanties tabled are  $\frac{-1}{2}p(1-p)$ minus sign being given in the column caption],  $(1-p^2)$  and  $\frac{1}{2}p(1+p)$ . When p is a four-decimal-place number each of these three is an exact nine-decimal-place number, but since three-point interpolation will seldom yield accuracy to an additional seven, eight, or nine figures, though it will do so if third and higher order differences are negligibly small, the table of coefficients is published to five decimal places only. The coefficients are rounded off to the nearest fifth decimal place according to the rule given in the next paragraph. These five-decimal-place coefficients facilitate getting an answer correct usually to three, four, or five additional figures. As it seldom happens that three-point interpolation will yield more than five additional correct figures it would be, in general, inutile to retain more than five decimal places in the coefficients. When more than five additional correct figures are desired, four-, six-, or eight-point interpolation coefficients as given in Tables III, IV, and V may be used. A five-figure coefficient can be readily encompassed in a single immediate memory operation, but the writer has found that an operation calling for an eight-figure span frequently overtaxes clerks (and professors) and is conducive to inaccuracy and slower procedure.

Rule for rounding off the fifth decimal place in Lagrangian three-point interpolation coefficients:

Let  $\tilde{c}$  = the correct (or non-rounded-off) value

Let c = the rounded-off value (i.e., the value tabled

Let e = the error, thus  $\tilde{c} = c + e$ 

Let the function be quadric in t. Thus we have

| Arguments          | Tabled<br>Values | Differences                | Then tabled values may be written               |
|--------------------|------------------|----------------------------|---|
| <b>a</b> -1        | t <sub>-1</sub>  |                            | t_1   |
|                    |                  | $\Delta_{-1}^{\mathtt{r}}$ |   |
| <b>a</b> _0        | t <sub>o</sub>   | $\Delta_{-1}^{II}$         | $t_{-1} + \Delta_{-1}^{I}$                      |
|                    |                  | $\Delta_0^{\mathtt{I}}$ 0  |   |
| $\boldsymbol{a}_1$ | <b>t</b> 1       | $\Delta_{-1}^{II}$         | $t_{-1} + 2\Delta_{-1}^{I} + \Delta_{-1}^{II}$  |
|                    |                  | $\Delta_1^{\mathtt{I}}$    |   |
| <b>a</b> _2        | t <sub>2</sub>   |                            | $t_{-1} + 3\Delta_{-1}^{I} + 2\Delta_{-1}^{II}$ |

The interpolated value for a given p is

$$t = (\hat{c}_{-1} - e_{-1})t_{-1} + (\hat{c}_{0} - e_{0})(t_{-1} + \Delta_{-1}^{I}) + (\hat{c}_{1} - e_{1})(t_{-1} + 2\Delta_{-1}^{I} + \Delta_{-1}^{II})$$

The error in this value, E, is

$$E = (e_{-1} + e_{0} + e_{1})t_{-1} + (e_{0} + 2e_{1})\Delta_{-1}^{I} + e_{1} \Delta_{-1}^{II}$$

The rounding off must certainly be such that  $(e_{-1} + e_0 + e_1) = 0$ , so we may write  $e_0 = -e_{-1} - e_1$ , then

$$E = (-e_1 - e_1)\Delta_1^{\text{I}} + e_1\Delta_1^{\text{II}}$$

Clearly we should round off so that, in addition to  $(e_{-1}+e_0+e_1)=0$ , the quantity  $(e_{-1}+e_1)$  shall be as small as possible. From [42] we see that

$$c_{-1} = \frac{-1}{2} p(1-p) = \frac{-p}{2} + \frac{p^2}{2}$$
 and  $c_1 = \frac{1}{2} p(1+p) = \frac{p}{2} + \frac{p^2}{2}$ 

Since  $\frac{p}{2} > \frac{p^2}{2}$  and since  $\frac{p}{2}$  is a figure of five decimal places the figures beyond the fifth decimal place of  $c_{-1}$  are complimentary to the figures beyond the fifth decimal place of  $c_1$ . Accordingly, if  $c_{-1}$  and  $c_1$  are rounded to their nearest fifth decimal place, figures  $(e_{-1} + e_1) = 0$ , so that then  $E = e_1 \Delta_{-1}^{\text{II}}$ , a small function of a second order difference only. Accordingly, the rounding-off rule that has been followed is "Record  $c_{-1}$  and  $c_1$  to their nearest five-decimal-place values and then adjust  $c_0$  so that  $e_{-1} + e_0 + e_1 = 0$ ."

As  $e_1$  never exceeds .0000 05 the maximum rounding-off error is .0000  $05\Delta_{-1}^{II}$ . For example, for argument .7500 of Table I we find

 $\Delta_{-1}^{\text{II}}$  = .0000 0007 so the maximum error due to rounding off of a three-point interpolated x (deviate in a unit normal distribution) is in the thirteenth decimal place which is far beyond the limits of this eight-place table and beyond the limits of utility of three-point interpolation had we a basic table to thirteen or more places. No purpose would here be served by exact (nine-place) three-point interpolation coefficients. The writer believes that the five-place values of Table II will serve well over 99 per cent of all situations in which three-point interpolation will serve.

Bearing upon Table III. In connection with Table II it was noted that no practical advantage results in using true, or nine-place, three-point interpolation coefficients for four-place p arguments, in that coefficients rounded off to five figures will yield as great accuracy as is permitted by the data to which three-point interpolation is applicable.

It will now be shown that no practical advantage results in using true, or ten-place, four-point interpolation coefficients for three decimal place p arguments, because four-point coefficients, rounded off to seven places, will yield as great accuracy as is permitted by the data to which four-point interpolation is applicable.

Assuming  $\Delta^{iv}$ :=. 0, for if it does not do so four-point interpolation is insufficient, and employing [43], we have  $t_p$ , the consequent for argument p:

$$t_{p} = \frac{1}{6} p(1-p^{2})(2-p) \left[ \frac{-1}{1+p} t_{-1} + \frac{3}{p} (t_{-1} + \Delta^{I}) + \frac{3}{1-p} (t_{-1} + 2\Delta^{I} + \Delta^{II}) \right]$$

$$- \frac{1}{2-p} (t_{-1} + 3\Delta^{I} + 3\Delta^{II} + \Delta^{III})$$
[43a]

If the coefficients  $c_{-1}$ ,  $c_0$ ,  $c_1$ , and  $c_2$  have errors  $e_{-1}$ ,  $e_0$ ,  $e_1$ , and  $e_2$  respectively, the error,  $e_p$ , in  $t_p$  is

$$e_p = (e_{-1} + e_0 + e_1 + e_2)t_{-1} + (e_0 + 2e_1 + 3e_2)\Delta^{I} + (e_1 + 3e_2)\Delta^{II} + e_2 \Delta^{III}$$

$$+ e_2 \Delta^{III} \qquad \qquad \text{Equivalent to formula [52]} \qquad \qquad [52a]$$

If we round off so as to make the coefficients of  $t_{-1}$ ,  $\Delta^{\text{I}}$ , and  $\Delta^{\text{II}}$  zero, the final error in  $t_{\text{p}}$  is the very small quantity  $e_2\Delta^{\text{III}}$ . Let a true coefficient equal a rounded-off coefficient plus an error, thus  $\tilde{c} = c + e$ . It will be observed that

$$\dot{c}_{1} = \left[p + \frac{p^{2}}{2}\right] - \left(\frac{p^{3}}{2}\right)$$

$$3\dot{c}_{2} = \left[-\frac{p}{2}\right] + \left(\frac{p^{3}}{2}\right)$$

$$\dot{c}_{0} = \left[1 - \frac{p}{2} - p^{2}\right] + \left(\frac{p^{3}}{2}\right)$$

$$3\dot{c}_{-1} = \left[-p + \frac{3p^{2}}{2}\right] - \left(\frac{p^{3}}{2}\right)$$

When p is a magnitude of three decimal places the [] terms do not extend beyond the seventh decimal place. As  $\frac{p^3}{2}$  is the compliment of  $-\frac{p^3}{2}$ , we observe that  $\widetilde{c}_1$  and  $3\widetilde{c}_2$  are complimentary for their portions that extend beyond the seventh decimal place. Similarly for  $\widetilde{c}_0$  and  $3\widetilde{c}_{-1}$ . Accordingly, if we round off  $\widetilde{c}_{-1}$  and  $\widetilde{c}_2$  to their nearest seventh decimal place values, the errors of this being  $e_{-1}$  and  $e_2$ , and round off  $\widetilde{c}_0$  and  $\widetilde{c}_1$  so that their errors are  $-3e_{-1}$  and  $-3e_2$  respectively, we will have seven place values for  $c_{-1}$ ,  $c_0$ ,  $c_1$ , and  $c_2$ . We will also have made the coefficients of  $t_{-1}$ ,  $\Delta^{\mathrm{I}}$ , and  $\Delta^{\mathrm{II}}$  in [52b] each equal to zero. The maximum error due to rounding off is the negligibly small quantity

Max. 
$$e_p = Max. e_2 \Delta^{III} = |.00000 005 \Delta^{III}|$$

The procedure just described was followed in getting the coefficients entered in Table III.

Bearing upon all the Interpolation Tables. The six- and eightpoint interpolation coefficients of Tables IV and V are similarly
the total p functions which are the coefficients of the t's in
formulas [45] and [47]. These are exact values as published to
ten and eleven decimal places for p arguments of three, two, and
one decimal places respectively. For the situations to which
they apply they will commonly yield from seven to ten additional
correct figures. Unless the user is gifted with an unusually
long immediate memory span it is inadvisable to attempt to recall
a ten or eleven figure coefficient through a single fixation.
The coefficients of Tables II and III can ordinarily be encompassed in a single memory act.

In all the tables of interpolation coefficients the signs of the successive coefficients are indicated at the tops of the columns.

In all of the tables the sum of the coefficients = 1.00000 00000 0.

This is important. If the user employs these tables to a less number of decimal places than published, he should, for each row employed, assure himself that the sum of the coefficients as he uses them = 1.

In Tables II, III, and IV, for values of p < .5, the argument is at the left and the coefficients are in order from left to right.

In connection with Table II, having arguments  $a_{-1}$ ,  $a_0$ ,  $a_1$ ,  $a_2$ , and tabled values  $t_{-1}$ ,  $t_0$ ,  $t_1$ ,  $t_2$ , and a value of p < .5, the three tabled values  $t_{-1}$ ,  $t_0$ ,  $t_1$  are operated upon. If, going from  $a_0$  to  $a_1$ , the value of p > .5, then reverse the direction of interpolation so that p, going from  $a_1$  to  $a_0$ , is less than .5 and the tabled values operated upon become  $t_2$ ,  $t_1$ ,  $t_0$ . Thus, for three-point interpolation a value of p > .5 is never called for.

In connection with Tables III and IV, for values of p > .5, enter at the right and read the coefficients in order from right to left.

We note that for interpolation using any odd number of points, p never need exceed .5. It can then be shown that the maximum error always occurs when p = .5, as also can be shown to be the case for all interpolation using an even number of points.

The error due to interpolation. The error inherent in an interpolation using a designated number of points is very approximately given by obtaining the difference between this value and that given using one more point. Thus, for linear interpolation the error  $e^{\dagger\dagger} = t^{\dagger\dagger\dagger} - t^{\dagger\dagger}$ . The maximum  $e^{\dagger\dagger}$  is designated  $E^{\dagger\dagger}$ , and similarly for the maximum error using a different number of points. We can express the maximum error of two-point interpolation as a function of a second-order difference,  $\Delta_0^{\text{II}}$ ; the maximum error of three-point interpolation as a function of a third order difference,  $\Delta_{-1}^{\text{III}}$ ; etc. These functions are given in the accompanying Table C.

#### TABLE C

### ERRORS AND MAXIMUM ERRORS INHERENT IN PARABOLIC INTERPOLATION OF DIFFERENT DEGREES

$$e^{i} = t^{i} - t^{i};$$
 Maximum  $e^{i} = E^{i} = \frac{1}{2} \Delta_{0}^{I} \dots [49]$   
 $e^{i} = t^{i} - t^{i};$  Maximum  $e^{i} = E^{i} = \frac{1}{8} \Delta_{0}^{II} \dots [50]$ 

$$e^{iii} = t^{iv} - t^{iii};$$
 Maximum  $e^{iii} = E^{iii} = \frac{1}{16} \Delta_{-1}^{III} \dots$  [51]

$$e^{iv} = t^{v} - t^{iv}$$
; Maximum  $e^{iv} = E^{iv} = \frac{3}{128} \triangle_{-1}^{1V} \dots [52]$ 

$$e^{v} = t^{v\dagger} - t^{v};$$
 Maximum  $e^{v} = E^{v} = \frac{3}{256} \Delta_{-2}^{V}$  [53]  
 $e^{v\dagger} = t^{v\dagger\dagger} - t^{v\dagger};$  Maximum  $e^{v\dagger} = E^{v\dagger} = \frac{5}{1028} \Delta_{-2}^{VI}$  [54]

$$e^{v11} = t^{v111} - t^{v11}$$
; Maximum  $e^{v11} = E^{v11} = \frac{5}{2048} \Delta_{-3}^{VII}$  [55]

$$e^{viii} = t^{ix} - t^{viii};$$
 Maximum  $e^{viii} = E^{viii} = \frac{35}{32768} \Delta_{-3}^{viii}$  [56]

These interpolation coefficient tables permit of greater accuracy than can be well demonstrated by use upon Table I. We will therefore illustrate their use in connection with a fifteen place table of logarithms. Let us find  $\log \pi$ . To fifteen decimal places  $\pi$  = 3.14159 26535 89793 ...., and its logarithm is .49714 98726 94134. We will interpolate in a table having three figure arguments and tabled entries with rounding-off errors in the fifteenth decimal place.

| Number | Log                | $\Delta^\mathtt{I}$                            | $\Delta^{II}$                               |
|--------|--------------------|--|---|
| 3.10   | .49136 16938 34273 |  |   |
| 3.11   | .49276 03890 26838 | .00139 86951 92565<br>.00139 42049 91605       | - 44902 00960                               |
| 3.12   | .49415 45940 18443 | .00138 97435 28005                             | - 44614 63600                               |
| 3.13   | .49554 43375 46448 | .00138 53105 26767                             | - 44330 01238                               |
| 3.14   | .49692 96480 73215 |  | - 44048 10381                               |
| 3.15   | .49831 05537 89601 | .00138 09057 16386                             | - 43768 87583                               |
| 3.16   | .49968 70826 18404 | .00137 65288 28803                             | - 43492 29456                               |
| 3.17   | .50105 92622 17751 | .00137 21795 99347                             | - 43218 32665                               |
|        |                    | .00136 78577 66682                             | 43210 32003                                 |
| 3.18   | .50242 71199 84433 | .00136 35630 72748                             | - 42946 93934                               |
| 3.19   | .50379 06830 57181 | .00130 33030 (2(46                             |   |
|        | 00000 00287        | Δ <sup>1Ψ</sup> Δ <sup>1</sup> 37360 - 2 74998 | $\Lambda_{\Lambda I}  \nabla_{\Lambda I I}$ |
|        | 00000 00284        | 62362 - 349                                    |   |
|        | 00000 00281        | - 2 71505<br>90857 - 344<br>- 2 68059          | - 47<br>46 + 11<br>- 58                     |
|        | 00000 00279        |  |   |
|        | 00000 00276        |  |   |
|        | 00000 00273        |  |   |
|        | 00000 00271        |  |   |

Due to the effect of the rounding-off error, seventh order differences are seen to be untrustworthy. Seven-point interpolation,—equivalent to using sixth order differences—is the highest order demanded by the data, but as we have tabled coefficient values for six-point, Table IV, and eight-point, Table V, and none for seven-point, we shall use the eight-point table and we may anticipate an error in the fifteenth place which is a slight augmentation of the rounding-off fifteenth place error in the basic table.

Employing eight-point interpolation, Table V, we obtain the seven values of the table herewith, the first six of which may be used in further six-point interpolation. The seventh value is unnecessary, but has been computed in order to show the error in fifth order differences attributable to the cumulative effect of the rounding-off error. The order of magnitude of  $\delta^{\Upsilon}$ , given by the approximate relationship [36], is .00000 00000 00000 3. We observe that the rounding-off error, a fifteenth decimal place error, is more potent than that given by [54].

| No.   |          | Log   |        | δΙ    |       | $\delta^{II}$ | διτι    | διγ         | 84  |
|-------|----------|-------|--------|-------|-------|---------------|---------|-------------|-----|
| 3.139 | . 49679  | 13157 | 00042  |       |       |               |         |             |     |
|       |          |       | .00013 | 83323 | 73173 |               |         |             |     |
| 3.140 | . 49692  | 96480 | 73215  |       | - 44  | 0 47883       |         |             |     |
|       |          |       | .00013 | 82883 | 25290 |               | - 28043 |             |     |
| 3.141 | .49706   | 79363 | 98505  |       | - 44  | 0 19840       |         | -28         |     |
|       |          |       | .00013 | 82443 | 05450 |               | - 28015 | •           | - 4 |
| 3.142 | .49720   | 61807 | 03955  |       | - 43  | 9 91825       |         | <b>- 24</b> |     |
|       |          |       | .00013 | 82003 | 13625 |               | -27991  |             | +7  |
| 3.143 | . 49734  | 43810 | 17580  |       | - 43  | 9 63834       |         | - 31        |     |
|       |          |       | .00013 | 81563 | 49791 |               | -27960  |             |     |
| 3.144 | . 497 48 | 25373 | 67371  |       | -43   | 9 35874       |         |             |     |
|       |          |       | .00013 | 81124 | 13917 |               |         |             |     |
| 3.145 | . 49762  | 06497 | 81288  |       |       |               |         |             |     |

Using six-point interpolation, Table IV, we obtain the four following values which may be used in further four-point interpolation. We must expect an augmented error in  $d^{\text{III}}$  in the fifteenth place.

| No.      | Log                | ď           | $d^{\mathtt{II}}$ | $d^{III}$ |
|----------|--------------------|-------------|-------------------|-----------|
| 3.14158  | .49714 81234 55457 |             |                   |           |
|          |                    | 13824 05653 |                   |           |
| 3.14159  | .49714 95058 61110 |             | - 4401            |           |
|          |                    | 13824 01252 |                   | - 1       |
| 3.14160  | .49715 08882 62362 |             | - 4400            |           |
|          |                    | 13823 96852 |                   |           |
| 3, 14161 | .49715 22706 59214 |             |                   |           |

Using four-point interpolation, Table III, we obtain the two following values which may be used in two-point interpolation.

No.

Log

 $a_0 = 3.14159 265$ 

 $t_0 = .49714 98721 97870$ 

 $a_1 = 3.14159 266$ 

 $t_1 = .49714 98735 80273$ 

We must expect an error in the fifteenth place. The approximate second order difference, given by [32] in which i = 10000 00 and  $|\Delta^{II}| = .00000 4$ , is .00000 00000 00000 004, so that linear interpolation is ample, but the error given by it will be consequent to the rounding-off error, i.e., a fifteenth (or possibly a fourteenth) place error and not that given by [50].

By linear interpolation we obtain  $t = .49714\ 98726\ 94124$ , with an expected error in the fifteenth or possibly the fourteenth place. Comparison with the true values reveals the error to be .00000 00000 00010.

In the interpolations just made we have used exact Lagrangian multipliers, so no rounding-off error consequent to rounding off the multipliers has been introduced. The three-point interpolation coefficients of Table II are exact for one and two decimal places of p only. This table is not recommended for use when a consequent correct to more than five figures beyond that given by no interpolation is desired. For example, an approximate value of  $\log \pi$  without interpolation is  $\log 3.14$ , which differs from log 3.15 in the third decimal place. If the problem is such that one is content with a logarithm correct to seven decimal places, which is five places additional to the number given by no interpolation at all, we can consider linear interpolation and, if that does not suffice, then three-point interpolation. We note that, since  $E^{ii} = .00000$  05, linear interpolation does not guarantee the five additional decimal place accuracy. Using the coefficients of Table II, we obtain log 3.141593 = .49714 99213 00. Linear interpolation between this value and the tabled value of log 3.14 gives log 3.14159 26536 = .49714 98734 which, being in error by 8 in the tenth decimal place, has given an answer correct to 6 decimal places additional to that given by no interpolation at all. Also this is three decimal places additional to that given by linear interpolation (which yields log 3.14159 26536 = .49714 96). Table II is published to enable speedy interpolation rather than that of highest accuracy. The use of Table III is quite speedy and, in general, yields a pretty high order of accuracy.

## SECTION VI: BEARING UPON TABLE VI FOUR-PLACE X<sup>2</sup> FUNCTIONS

Let us call an observed frequency in a uniquely defined class or cell, f; the theoretical frequency in this cell,  $\tilde{f}$ ; the difference between them, d, the cell divergence; and  $d^2/\tilde{f}$ , the cell square-contingency. The sum of all such for all cells is  $\chi^2$  (=  $\Sigma d^2/\widetilde{f}$ ), the square-contingency, and this divided by the number of degrees of freedom in the system, n, is  $\chi^2/n$ , the mean square-contingency. [The reader should note that this definition of mean square-contingency differs from that of certain earlier practice where  $\chi^2/n'$ , n' being the number of cells in the table, has been defined as the mean square-contingency.] If the theoretical cell frequencies are consequent to the right or true hypothesis,  $\chi^2/n$  is a chance deviation from 0, differing in form of distribution for each separate number of degrees of freedom. P, the value tabled herewith, is the probability that, if the observed  $\chi^2/n$  is a measure in this chance distribution of  $\chi^2/n$  values, a greater value would arise as a matter of chance. Under a true hypothesis the mean value of  $\chi^2/n$  is 1.00 and the median value, for which P = .5000, is slightly less than 1.00. Thus, if the hypothesis is correct, and the experiment repeated many times, resulting P values less than .5000 will occur as often as values greater than .5000. The value .5000 should be taken as the one which establishes the hypothesis with maximum likelihood. Very large values of P should be looked upon askance, just as should very small values.

But whatever the value, P is a final, interpretative, or terminal statistic. As such, it does not enter into further computation and does not call for accuracy to the number of decimal places desirable in intermediate statistics, that is, those arising in the logical process between the raw data and the crucial terminal statistic. A two-decimal-place value of P may well represent as great refinement as will lead to any difference in conclusions. The present table to four decimal places, enabling interpolation yielding two-orthree-place accuracy, may thus be deemed generally adequate for all interpretative needs. Accuracy to an additional figure or two is available by use of the method of Section VIII giving P from a variance ratio.

For many purposes a knowledge of the value of  $\chi^2/n$  suffices. For one degree of freedom  $\sqrt{\chi^2/1}$  is distributed as half a unit normal distribution, and for n large Fisher and Yates\* make the \*R. A. Fisher and F. Yates, STATISTICAL TABLES, 1938, page 27.

useful observation that then  $\sqrt{2\chi^2} - \sqrt{2n-1}$  "may be used as a normal deviate with unit variance." A still closer approximation and one serviceable for three or more degrees of freedom is given by Wilson and Hilferty\*.

If  $\chi_n^2(p)$  is the  $\chi^2$  with n degrees of freedom that as a matter of chance is exceeded p proportion of the time and if  $x_p$  is the x in a unit normal distribution that is exceeded p proportion of the time, Wilson and Hilferty give the following approximate relationship:

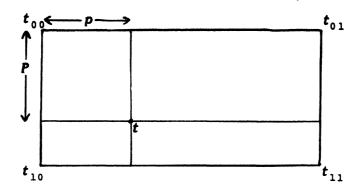
The following table shows how nearly correct are the P values, using these approximations, if the number of degrees of freedom is 30, the highest number here tabled. Either approximation is so close that it is judged that additional values for higher numbers of degrees of freedom are not needed.

| FOR | 30 | DEGREES | ΩF | FREEDOM | THE | VALUE | ٥F | P |
|-----|----|---------|----|---------|-----|-------|----|---|
|     |    |         |    |         |     |       |    |   |

| $\chi^2/n$ | GIVEN BY<br>TABLE II IS | RESULTING FROM<br>THE FISHER<br>APPROXIMATION IS | RESULTING FROM THE WILSON-HILFERTY APPROXIMATION IS |
|------------|-------------------------|--|---|
| .25        | 1.0000-                 | .9999  | 1.0000-   |
| .36        | .9995                   | .9988  | .9992   |
| .49        | .9913                   | .9960  | .9912   |
| .64        | .9357                   | .9311  | .9357   |
| .81        | .7583                   | .7611  | .7587   |
| 1.00       | .4657                   | .4742  | .4657   |
| 1.21       | .1984                   | .2006  | .1981   |
| 1.44       | .0589                   | .0533  | .0562   |
| 1.69       | .0118                   | .0085  | .0105   |
| 1.96       | .0013                   | .0008  | .0013   |
| 2.25       |                         | .0000+   | .0001   |

The form of Table VI is designed to facilitate interpolation for any desired value of  $\chi^2$  and any number of degrees of freedom. The accuracy of interpolation has been facilitated by (a) using  $\chi$  / $\sqrt{n}$  as the argument, where n is the number of degrees of freedom and  $\chi$  is simply the  $\sqrt{\chi^2}$ . Using this argument, two-or three-place accuracy in P can very generally be obtained for values of  $\chi$  and of n other than those tabled, by simple linear interpolation between four points as follows:

<sup>\*</sup> Edwin B. Wilson and Margaret M. Hilferty, "The Distribution of Chi-square," PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES, Vol. 17, No. 12, December, 1931, pages 684-688.



Given the four tabled entries  $t_{00}$ ,  $t_{01}$ ,  $t_{10}$ ,  $t_{11}$ , let a value t be desired which corresponds to arguments p fraction of the distance from  $t_{00}$  to  $t_{01}$  and P fraction of the distance from  $t_{00}$  to  $t_{10}$ , as illustrated. Then, letting q=1-p and Q=1-P, by two-way linear interpolation

$$t = qQt_{00} + qPt_{10} + Qpt_{01} + pPt_{11} \dots$$
 [58]

Quadric interpolation in  $\chi / \sqrt{n}$ , using Table II, followed, if need be, by linear interpolation in n, is also simple.

Where quadric interpolation is not employed it is frequently simpler to use  $\chi^2/\sqrt{n}$  as the argument instead of the argument  $\chi/\sqrt{n}$  having equally spaced intervals.

# SECTION VII: BEARING UPON TABLE VII EIGHT-PLACE SQUARE ROOTS, CUBE ROOTS, AND NATURAL LOGARITHMS

The square and cube roots of all three digit numbers are given in this table and reference to the maximum interpolation errors shows that accuracy to 1 in the eighth significant figure is available by either linear or quadric interpolation.

Use of the table with simple machine computation enables the obtaining of still more accurate square and cube roots. Let N be the number whose square root, r, is sought. Let r' be the first approximation to this value as obtained from Table VII. Let R' = N/r'. Then an improved approximation is

This is substantially correct to twice as many digits as the number of digits of r' and r'' that agree. If not sufficiently accurate, the process may be repeated, using r'' as the approximate root.

A rapid method for obtaining a more precise cube root than the

eight figure precision of linear or quadric interpolation is as follows: Let F be the number whose cube root, f, is desired. Let f', as found from Table VII, be the first approximation to this answer. Let  $\phi' = F/f'^2$ . A rapid computing machine method for obtaining  $\phi'$  is to square f', transfer from the product dial to the keyboard and, by build-up multiplication, multiply by such a number, namely  $\phi'$ , as to yield F. Then an improved approximation to f is f''.

If f' and f'' agree to j figures, then f' will in general be correct to (2j+1) figures. A rapid machine computation of  $(\phi^-f')/3$  is accomplished as follows: From Table VII determine f', a quantity slightly less than f. Set f' into the keyboard and square. Transfer  $f'^2$  from the product dial to the keyboard. Clear product and rotation counter dials. Multiply  $f'^2$  by f'. Clear the rotation counter dial. Now by build-up multiplication continue to multiply  $f'^2$  by such a number, namely  $(\phi'^-f')$ , as is necessary to produce f' in the product dial. One-third of this quantity, showing in the rotation counter dial, added to f' is f''.

The natural logarithms of numbers from 1.00 to 10.00 are given. To obtain the natural logarithms of three or more decimal place numbers between these limits, linear, quadric, and higher interpolation procedures are available. To obtain the natural logarithms of numbers less than 1.00 or greater than 10.00, it is necessary first to take out 10 to such a power as to leave a number between 1.00 and 10.00. Then add the natural logarithm of this number to the natural logarithm of the power of 10 removed, as given in Table D herewith.

```
TABLE D. NATURAL LOGARITHMS OF POWERS OF 10
ln 10-j
                       = -j(2.3025850930)
                .001 = -6.90775 52790
\ln 10^{-3} = \ln
\ln 10^{-2} = \ln
                 .01 = -4.6051701860
\ln 10^{-1} = \ln
                 .1
                          - 2.30258 50930
\ln 10^{\circ} = \ln
                1
                       =
                             .00000 00000
\ln 10^1 = \ln
                10
                       =
                             2.30258 50930
\ln 10^2 = \ln
               100
                       =
                            4.60517 01860
\ln 10^3 = \ln 1000
                       = 6.90775 52790
ln 10<sup>j</sup>
                       = j(2.3025850930)
```

As an example we will find &n .0102. We write

 $.0102 = 1.02 \times 10^{-2}$ 

 $ln \ 10^{-2} = -4.6051 \ 7019$  $ln \ 1.02 = .0198 \ 0263$ 

ln .0102 = -4.5853 6756

## SECTION VIII: BEARING UPON TABLE VIII AND UPON VARIANCE RATIO PROBABILITIES VIA A NORMALIZING TRANSFORMATION\*

The problem of approximating a non-normal unimodal distribution, such as is the variance ratio distribution, by a function of the normal distribution has been attacked by many mathematicians with varying degrees of success. The degree of success is considered synonymous with the simplicity of the transformation, for any desired agreement can be attained if enough terms are kept in the transforming function.

The advantage of such a transformation lies not only in voiding the need for a wide variety of tables of percentage points, but also in simplifying thought in that a single probability attaches to the observed datum rather than some interval on the probability scale, as at present when percentage-point tables are used.

Notation:

$$F_{ij} = \frac{V_i}{V_j} = a$$
 variance ratio in which  $V_i$ , the numerator

variance, is the sum of squared deviations from a mean divided by i, the number of degrees of freedom, and  $V_j$  is the similar denominator function based upon j degrees of freedom. These variances are, of course, independent. We shall designate the cube roots of  $F_{ij}$ ,  $V_i$ , and  $V_j$  by  $f_{ij}$ ,  $v_i$ , and  $v_j$ .  $P_i$ , or, if necessary for clarity,  $P_{ij}$ , is the probability that an  $F_{ij}$  as great as that observed would, under the hypothesis, arise as a matter of chance.

We may observe that the limit in one direction, of the F distribution, is  $F_{i\,\infty}$  and that this is a  $\chi^2/i$  distribution and that the limit in another direction is  $F_{1j}$ , which is the distribution of  $t^2$  (Student's t squared). Thus a completely adequate normalizing distribution of F would avoid the need of probability tables of  $\chi^2$  and of t, as well as of percentage-point tables for other variance ratios.

Let us note that, in a scatter diagram with axes  $V_1$  and  $V_1$ ,

<sup>\*</sup> The writer gratefully acknowledges assistance received from Dr. Kenneth J. Arnold in the research connected with this section.

the variance ratio  $F_{ij}$  is shown by the straight line  $F_{ij}$   $V_j$   $-V_i$  = 0, and that the proportionate number of cases, or volume to the right of this line is  $P_i$ —the probability sought. If we can perform a transformation that normalizes the marginal totals, i.e., the  $V_i$  and the  $V_j$  distributions (which, as noted, are  $\chi_i^2/i$  and  $\chi_j^2/j$  distributions), and that transforms the straight line  $F_{ij}$  into a straight line, the medians of the  $V_i$  and the  $V_j$  distributions will be transformed into medians of the new variables and the volume to the right of the new straight line will equal that to the right of  $F_{ij}$   $V_j$  -  $V_i$  = 0 in the  $V_i$ ,  $V_j$  surface. In terms of the new variables the bivariate distribution is of this type:

$$z = k \exp \frac{-1}{2} \left[ \frac{(X - M_1)^2}{\sigma_1^2} + \frac{(Y - M_2)^2}{\sigma_2^2} \right]$$

and the transformed straight line is, say, AX + BY + C = 0. If we let  $x = \frac{X - M_1}{\sigma_1}$  and  $y = \frac{Y - M_2}{\sigma_2}$ , these two equations become

$$z = k \exp \frac{-1}{2} [x^2 + y^2]$$

and ax + by + c = 0. The volume sought is that to the right of the line ax + by + c = 0. The bivariate distribution is normal and of unit variance in both dimensions, so any array, parallel or not parallel to an axis, is a normal distribution of unit variance. The perpendicular distance from ax + by + c = 0 to the origin (x = 0, y = 0) equals  $c / \sqrt{a^2 + b^2}$  and every array perpendicular to ax + by + c = 0 has the same proportion of cases to the right of this line, which is accordingly the proportion of the total volume to the right of this line. This proportion is q of Table I.

The  $\chi^2$  distribution is positively skewed, while its logarithm is negatively skewed. The intermediate distribution, that of  $(\chi^2/i)^{\frac{1}{3}}$ , was found by Wilson and Hilferty to have, to a close approximation, a mean of  $(1-\frac{2}{9i})$ , a variance of 2/9i, negligible skewness except perhaps in the case of i=1, and negligible diversion from mesokurtosis except perhaps in case i<4. The following figures are taken from Wilson and Hilferty\*:

<sup>\*</sup> Edwin B. Wilson and Margaret M. Hilferty, "The Distribution of Chi-square," PROC. OF THE NAT. ACAD. OF SCI., Vol. 17, No. 12, 1931, pages 684-688.

TABLE E

THE  $(\chi^2/i)^{\frac{1}{3}}$  DISTRIBUTION

| <i>i</i> Mean |        | W and H<br>approximation | o²     | W and H approximation | Pearso             | on¹ s              |
|---------------|--------|--------------------------|--------|-----------------------|--------------------|--------------------|
| 110411        | 110411 | 1-2/9i                   |        | 2/9i                  | $oldsymbol{eta_1}$ | $oldsymbol{eta_2}$ |
| 1             | .8024  | .7778                    | . 1870 | .2222                 | .174               | 2.68               |
| 2             | .8930  | .8889                    | .1053  | .1111                 | .028               | 2.73               |
| 3             | .9272  | .9259                    | .0723  | .0741                 | .0086              | 2.80               |
| 10            | .9778  | .9778                    | .0222  | .0222                 | .0014              | 2.97               |
| 30            | .9926  | .9926                    | .00741 | .00741                | .0000+             | 3.14               |

If we take the cube root of  $F_{ij}$ , namely  $f_{ij} = v_i/v_j$ , clearly  $f_{ij}$  is a straight line in the  $v_i$ ,  $v_j$  plane and  $v_i$  and  $v_j$  are very nearly normally distributed except for small values of i or j, so the problem is solved except for these small values. A numerical check shows excellent agreement between the true values of P and those given utilizing the Wilson and Hilferty transformation if i and j are both greater than 3. In fact, there is very excellent agreement in the upper half of the curve, where  $F_{ij} > 1$  and P > .5, no matter the value of i, if j > 3. This is the region of almost universal concern, but a slight further modification is here given, equation [63] which yields a very nearly correct value of P for all values of P and P and P and P and P and P are given, equation [63] which yields a very nearly correct value of P for all values of P and P and P and P and P are given, equation [63] which yields a very nearly correct value of P and smaller than P and P and for values of P both greater and smaller than P

Approximately normalizing with unit variance the  $V_1$  distribution by means of the Wilson-Hilferty transformation, we have

$$x_1 = \frac{v_1 - 1 + \frac{2}{9i}}{\sqrt{\frac{2}{9i}}} = 3 v_1 \sqrt{\frac{i}{2}} - 3\sqrt{\frac{i}{2}} + \frac{1}{3}\sqrt{\frac{2}{i}}$$

$$V_1^{\frac{1}{3}} = V_1 = \frac{\sqrt{2} x_1}{3 \sqrt{i}} + 1 - \frac{2}{9i}$$

and similarly

$$v_j = \frac{\sqrt{2} x_j}{3 \sqrt{j}} + 1 - \frac{2}{9j}$$

$$f_{ij} \left( \frac{\sqrt{2} x_j}{3 \sqrt{j}} + 1 - \frac{2}{9j} \right) - \left( \frac{\sqrt{2} x_i}{3 \sqrt{i}} + 1 - \frac{2}{9i} \right) = 0$$

This is the equation of the  $f_{11}$  line in the  $x_1, x_1$  plane. The

distance of this line from the origin, 0,0, is

$$d = \frac{-\theta_1 + \theta_j f_{1j}}{\sqrt{\frac{1}{i} + \frac{1}{j} f_{1j}^2}}$$
 The d-transformation approximately normalizing  $F_{1j}$  [61]

which we will refer to as the d-transformation. In this

$$\theta_i = \frac{3}{\sqrt{2}} - \frac{\sqrt{2}}{3i}$$
, and similarly for  $\theta_j$ 

$$\theta_i = 2.12132 \ 03 - \frac{.47140 \ 452}{i} \dots$$
 [62]

Table VIII herein gives values of  $\theta_i$  for various values of i.

Though treating d as a deviate in a unit normal distribution yields good values of P for most situations, it was found by trial and retrial methods that a better value, in fact, excellent values even when i or j is l or l, is l from l where

$$x = d(1 + \frac{.0800}{i^3} d^4)$$
 The xd normalizing transformation [63]

When following this xd procedure we must so write  $F_{ij}$  that it is greater than 1. If interested in P from an  $F_{ij} < 1$ , we calculate P from  $F_{ji}$  and use the relationship  $P_{ij} = 1 - P_{ji}$ . The modifying factor  $[1 + (.0800 \ d^4)/j^3]$  is not a moment or least-squares derivation but one meeting the requirement of simplicity and giving a good fit in the neighborhood of what seem, for experimental purposes, to be the crucial percentage points, namely, .99, .95, .90, .50, .10, .05, and .01.

In Table F herewith are comparative results for various percentage levels and various combinations of degrees of freedom. The first entry in each cell is P derived from d. A second entry which is P derived from x is given in case j is small, where there may be a significant difference from P derived from d.

TABLE F  $\hspace{-0.5cm}P$  values for various F s and various combinations of degrees of freedom

Correct values of P for various unrecorded  $F_{i\,i}{}^{i}$ s . 500 . 250 . 100 <u>.050</u> <u>.010</u> .0010 P from d . 500 .261 .131 .093 .061 .0518  $F_{11}$ P from x . 500 .258 .104 .049 .012 .0055 P from d .501 .251 .019 .0079 .105 .058  $F_{12}$ P from x . 501 .251 .007 . 100 .047 .0006 P from d . 499 .259 .132 .095 .062 .0520  $F_{21}$ P from x . 499 .256 .052 .013 .0056 . 105 P from d .506 .249 .097 .048 .010 .0011  $F_{1,10}$ P from x . 506 . 249 .0011 .097 .048 .010 P from d .494 .256 .094 .062 .132 .0520  $F_{10,1}$ P from x .494 .252 .105 .052 . 103 .0057 .010 .0012 P from d . 507 .249 .096 .047  $F_{1 \omega}$ .0012 P from x . 507 .249 .096 .047 .010 P from d . 493 .255 .132 .094 .062 .0523  $F_{\infty 1}$ P from x . 493 .251 .104 .052 .013 .0058 .021 .0087 . 500 .251 .106 .059 P from d **F**<sub>2 2</sub> P from x .500 .101 .008 .0008 .250 .049 P from d . 503 . 250 .099 .049 .010 .0011  $F_{2,10}$ P from x .010 .0011 .503 . 250 .099 .049 P from d .248 .106 .060 .021 .0088 . 497  $F_{10,2}$ P from x .247 .100 .050 .009 .0009 . 497 P from d .500 .246 .095 .047 .009 .0010  $F_{2 \infty}$ P from x .500 .246 .095 .047 .009 .0010 P from d .500 .249 .107 .061 .022 .0099  $F_{\infty}$ .009 .0013 P from x .500 .248 .102 .051

Herewith is a numerical illustration of the computational steps. Let  $F_{24} = 10.00$ . We desire the probability, P, that a variance ratio as large as this would arise as a matter of chance.

$$\sqrt[3]{F_{24}} = f_{24} = f$$

$$= 2.1544$$

$$f^{2} = 4.6414$$

$$Denominator = \sqrt{\frac{1}{i}} + \frac{1}{j} f^{2} = \sqrt{.5 + .25} f^{2} = 1.2886$$

$$Numerator = -\theta_{1} + \theta_{j} f = -1.88561 8 + 2.00346 9 f = 2.4307$$

$$d = Numerator/Denominator = 1.8863$$

$$1 + \frac{.08}{j^{3}} d^{4} = 1 + .00125 d^{4} = 1.0158$$

$$x = d \left(1 + \frac{.08}{j^3} d^4\right) = 1.9161$$

In case  $j=\infty$  the computation is still simpler, for then  $V_j=1$  and 1/j=0. In this case  $F_{1\infty}=V_1$ . The test is now that of  $\chi_1^2$ , a  $\chi^2$  with i degrees of freedom, for  $iV_1=\chi_1^2$ . For illustration, let  $V_{+}=2.00$ .

$$\sqrt[3]{F_{\psi \infty}} = f$$

$$= 1.2599$$

$$Denominator = \sqrt{\frac{1}{i}}$$

$$= .5000$$

$$Numerator = -\theta_1 + \theta_{\infty} f = -2.003469 + 2.121320 f = .6692$$

$$x = d = Numerator/Denominator$$

$$= 1.3384$$

$$P \text{ from table of normal distribution}$$

$$= .0904$$

This illustrates the use of this method in lieu of the  $\chi^2$  distribution.

An illustration of its use in lieu of "Student's" t has already been provided in Table F. The  $t^2$  distribution is that of  $F_{1j}$ . Let  $t_{1,10} = 1.812$ , which is the value given at the .100 level in Fisher's Table of the t-distribution. We have

$$F_{1,10} = t_{1,10}^2 = 3.2833$$

Proceeding as before we obtain P = .097, as recorded in Table F. Fisher's z is related to the variance ratio by the equation  $e^{2z} = F$  and all the purposes of percentage points in z are identically served by the same percentage points in F.

An incomplete beta-function is also related to F. The x of Pearson's\* Table of the Incomplete Beta-Function and of Thompson's† Table of Percentage Points of the Incomplete Beta-Function is related to F thus

$$x_{1j} = \frac{1}{1 + \frac{i}{j} F_{1j}}$$
 Also  $i = \text{Thompson's } \nu_1 = \text{Pearson's } 2q$   
Also  $j = \text{Thompson's } \nu_2 = \text{Pearson's } 2p$ 

substituting  $V_1/V_j$  for  $F_{ij}$ 

$$x_{ij} = \frac{j V_j}{i V_i + j V_i}$$

The quantity  $iV_1$  is a variance prior to division by the number of degrees of freedom. Thus, if  $(iV_1 + jV_1)$  is a total variance which can be split into independent parts  $iV_i$  and  $jV_i$ , then  $x_{11}$  of Pearson or Thompson is the ratio of a part variance to a total variance, whereas  $F_{1}$ ; is the ratio of one part variance to the other part variance. We thus see that P from F, or from the d or the xd transformations, serves the same field as Pfor the incomplete beta-function. However, since Pearson required of his tables an accuracy of five significant figures, and Thompson's tables are to five decimal places in x, we can expect an accuracy in P of the same general order, that is, to the fourth or fifth decimal place. Both degrees of accuracy mentioned are under the proviso, which is always subject to question, that the original measures which have led to the denominator variance of the variance ratio (usually errors of measurement) are, in the population of such measures, normally distributed.

<sup>\*</sup> Karl Pearson, Editor, TABLES OF THE INCOMPLETE-BETA FUNCTION, 1934.

<sup>†</sup> Catherine M. Thompson, "Table of Percentage Points of the  $\chi^2$  Distribution," BIOMETRIKA, Vol. 32, 1941, pages 187-191.

<sup>, &</sup>quot;Table of Percentage Points of the Incomplete Beta-Function," BIUMETRIKA, Vol. 32, 1941, pages 151-153.

## T A B L E S

Table I Supplementary Values

### .9999 .0001

| P  | ×                                      | Z  | q   |
|--|--|--|---|
| .9999                                    | 3.7190 1649                            | .0003 9584 8   | .0001 [1 in 10 thousand   |
| .9999 5<br>.9999 9<br>.9999 95           | 3.8905 919<br>4.2648 908<br>4.4171 734 | .0002 0607 072<br>.0000 4478 7331<br>.0000 2312 3795         | .0000 5<br>.0000 1 [1 in 100 thousand                                 |
| .9999 99<br>.9999 995<br>.9999 999       | 4.7534 243<br>4.8916 385<br>5.1993 376 | .0000 0494 8328 2<br>.0000 0254 0881 0<br>.0000 0053 7954 87 | .0000 01 [1 in a million]<br>.0000 005<br>.0000 001 [1 in 10 million] |
| .9999 9995<br>.9999 9999<br>.9999 9999 5 | 5.3267 24<br>5.6120 01<br>5.7307 3     | .0000 0027 5153 1<br>.0000 0005 7803 52<br>.0000 0002 9479 8 | .0000 0005<br>.0000 0001 [1 in 100 million]<br>.0000 0000 5           |
| .9999 9999 9                             | 5.9978 1                               | .0000 0000 6156 53   | .0000 0000 1 [1 in a U.S. billion                                     |

#### TABLE I

## Normal Distribution, Simple Correlation, and Probability Functions

- p = the larger proportion in a dichotomized unit normal distribution;
   or a proportion > .5;
   or a correlation coefficient > .5.
- q=1-p.
- x = the distance from the mean to the point of dichotomy in the unit normal distribution.
- z = the ordinate at the point of dichotomy in the unit normal distribution.
- $\epsilon^{11}$  and  $\epsilon^{111}$  are the maximal two- and three-point interpolation errors, as given by formulas [50] and [51] when p, or q, are the arguments.  $\epsilon^{11}$  is positive in connection with x and negative in connection with z.
- $\epsilon^{-11}$  and  $\epsilon^{-111}$  are the maximal inverse two- and three-point interpolation errors in p, or q, when x is the argument, as given by formulas [6] and [9].

.5000 .5000

| .5000          | •                     | _            | 100          | $\sqrt{1-p^2}$   | $\sqrt{1-q^2}$   | ~                |
|----------------|-----------------------|--------------|--------------|------------------|------------------|------------------|
| P              | *                     | <b>Z</b>     | 1 <i>pq</i>  |                  |                  | <b>q</b>         |
| .5000          | .0000 0000            | .3989 4228   | .5000 0000   | .8660 2540       | .8660 2540       | .5000            |
| .5001          | 02 5066               | 4227         | .4999 9999   | .8659 6766       | 0 8313           | .4999            |
| .5002<br>.5003 | 05 0133<br>07 5199    | 4223<br>4217 | 9996<br>9991 | 9 0990<br>8 5213 | 1 4084<br>1 9854 | .4998<br>.4997   |
| .5004          | 10 0265               | 4208         | 9984         | 7 9434           | 2 5622           | .4996            |
| .5004          | 12 5331               | 4206<br>4197 | 9975         | 7 3654           | 3 1389           | .4995            |
| .5006          | 15 0398               | 4183         | 9964         | 6 7872           | 3 7154           | .4994            |
| .5007          | 17 5464               | 4167         | 9951         | 6 2088           | 4 2917           | .4993            |
| .5008          | 20 0530               | 4148         | 9936         | 5 6303           | 4 8679           | .4992            |
| .5009          | 22 5597               | 4127         | 9919         | 5 0516           | 5 4440           | .4991            |
| .5010          | .0025 0663            | .3989 4103   | .4999 9900   | .8654 4728       | .8666 0198       | .4990            |
| .5011          | 27 5729               | 4076         | 9879         | 3 8939           | 6 5956           | .4989            |
| .5012<br>.5013 | 30 0796<br>32 5862    | 4048<br>4016 | 9856<br>9831 | 3 3147<br>2 7355 | 7 1712<br>7 7466 | .4988<br>.4987   |
| .5014          | 35 0929               | 3982         | 9804         | 2 1560           | 8 3219           | .4986            |
| .5014          | 37 5995               | 3946         | 9775         | 1 5764           | 8 8970           | .4985            |
| .5016          | 40 1062               | 3907         | 9744         | 0 9967           | .8669 4720       | .4984            |
| .5017          | 42 6128               | 3866         | 9711         | .8650 4168       | .8670 0468       | .4983            |
| .5018          | 45 1195               | 3822         | 9676         | .8649 8368       | 0 6214           | .4982            |
| .5019          | 47 6261               | 3776         | 9639         | 9 2566           | 1 1959           | .4981            |
| .5020          | .0050 1328            | .3989 3727   | .4999 9600   | .8648 6762       | .8671 7703       | .4980            |
| .5021          | 52 6394<br>55 1461    | 3675         | 9559<br>9516 | 8 0957<br>7 5150 | 2 3445<br>2 9185 | .4979<br>.4978   |
| .5022          | 57 6528               | 3621<br>3565 | 9471         | 6 9342           | 3 4924           | .4977            |
| .5024          | 60 1594               | 3506         | 9424         | 6 3532           | 4 0662           | .4976            |
| .5025          | 62 6661               | 3445         | 9375         | 5 7721           | 4 6398           | .4975            |
| .5026          | 65 1728               | 3381         | 9324         | 5 1908           | 5 2132           | .4974            |
| .5027          | 67 6795               | 3314         | 9271         | 4 6094           | 5 7865           | .4973            |
| .5028<br>.5029 | 70 1862<br>72 6929    | 3245<br>3174 | 9216<br>9159 | 4 0278<br>3 4460 | 6 3596<br>6 9326 | .4972<br>.4971   |
| .5030          | .0075 1996            | .3989 3100   | .4999 9100   | .8642 8641       | .8677 5054       | .4970            |
|                |                       |              |              |                  |                  |                  |
| .5031          | 77 7063<br>80 2130    | 3024<br>2945 | 9039<br>8976 | 2 2820<br>1 6998 | 8 0781<br>8 6506 | .4969<br>.4968   |
| .5033          | 82 7197               | 2863         | 8911         | 1 1175           | 9 2229           | .4967            |
| .5034          | 85 2264               | 2779         | 8844         | .8640 5349       | .8679 7952       | .4966            |
| .5035          | 87 7331               | 2693         | 8775         | .8639 9523       | .8680 3672       | .4965            |
| .5036          | 90 2398               | 2604         | 8704         | 9 3694           | 0 9391           | .4964            |
| .5037          | 92 7466               | 2512         | 8631         | 8 7864           | 1 5109           | .4963            |
| .5038          | 95 2533<br>.0097 7601 | 2418<br>2322 | 8556<br>8479 | 8 2033<br>7 6200 | 2 0825<br>2 6539 | .4962<br>.4961   |
| .5040          | .0100 2668            | .3989 2223   | .4999 8400   | .8637 0365       | .8683 2252       | .4960            |
| .5041          | 02 7736               | 2121         | 8319         | 6 4529           | 3 7963           | .4959            |
| .5042          | 05 2803               | 2017         | 8236         | 5 8692           | 4 3673           | .4958            |
| .5043          | 07 7871               | 1911         | 8151         | 5 2852           | 4 9382           | .4957            |
| .5044          | 10 2939               | 1802         | 8064         | 4 7012           | 5 5089           | .4956            |
| .5045          | 12 8007<br>15 3075    | 1690<br>1576 | 7975<br>7884 | 4 1169<br>3 5325 | 6 0794<br>6 6498 | . 4955<br>. 4954 |
| 1              |                       | I            |              | į.               | i                |                  |
| .5047          | 17 8143<br>20 3211    | 1459<br>1340 | 7791<br>7696 | 2 9480<br>2 3633 | 7 2200<br>7 7901 | .4953            |
| .5049          | 22 8279               | 1219         | 7599         | 1 7784           | 8 3600           | .4951            |
| .5050          | .0125 3347            | .3989 1095   | .4999 7500   | .8631 1934       | .8688 9297       | .4950            |
| -11            | 11                    | 1            | 1            | ,                | ,                | ,                |

| P              | x                  | z            | √pq          | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q                |
|----------------|--------------------|--------------|--------------|--------------------------|----------------------|------------------|
| .5050          | .0125 3347         | .3989 1095   | .4999 7500   | .8631 1934               | .8688 9297           | .4950            |
| .5051          | 27 8415            | 0968         | 7399         | 0 6083                   | .8689 4994           | .4949            |
| .5052          | 30 3484            | 0839         | 7296         | .8630 0229               | .8690 0688           | .4948            |
| .5053          | 32 8552            | 0707         | 7191         | .8629 4375               | 0 6381               | .4947            |
| .5054          | 35 3621            | 0573         | 7084         | 8 8518                   | 1 2073               | .4946            |
| .5055          | 37 8689            | 0437         | 6975         | 8 2660                   | 1 7763               | .4945            |
| .5056          | 40 3758            | 0298         | 6864         | 7 6801                   | 2 3451               | .4944            |
| .5057          | 42 8827            | 0156         | 6751         | 7 0940                   | 2 9138               | .4943            |
| .5058          | 45 3896            | .3989 0012   | 6636         | 6 5078                   | 3 4824               | .4942            |
| .5059          | 47 8965            | .3988 9865   | 6519         | 5 9213                   | 4 0508               | .4941            |
| .5060          | .0150 4034         | .3988 9716   | .4999 6400   | .8625 3348               | .8694 6190           | .4940            |
| .5061          | 52 9103            | 9564         | 6279         | 4 7481                   | 5 1871               | .4939            |
| .5062          | 55 4172            | 9410         | 6156         | 4 1612                   | 5 7551               | .4938            |
| .5063          | 57 9241            | 9254         | 6031         | 3 5741                   | 6 3228               | .4937            |
| .5064          | 60 4311            | 9094         | 5904         | 2 9870                   | 6 8905               | .4936            |
| .5065          | 62 9380            | 8933         | 5775         | 2 3996                   | 7 4580               | .4935            |
| .5066          | 65 4450            | 8768         | 5644         | 1 8121                   | 8 0253               | .4934            |
| .5067<br>.5068 | 67 9520<br>70 4590 | 8602         | 5511         | 1 2244                   | 8 5925               | .4933            |
| .5069          | 70 4390<br>72 9660 | 8433<br>8261 | 5376<br>5239 | 0 6366<br>.8620 0487     | 9 1595<br>.8699 7264 | .4932<br>.4931   |
| .5070          | .0175 4730         | .3988 8087   | .4999 5100   | .8619 4605               | .8700 2931           | .4930            |
|                |                    |              |              |                          |                      |                  |
| .5071<br>.5072 | 77 9800<br>80 4870 | 7910<br>7731 | 4959<br>4816 | 8 8723<br>8 2838         | 0 8597<br>1 4261     | . 4929<br>. 4928 |
| .5073          | 82 9941            | 7549         | 4671         | 7 6952                   | 1 9924               | .4927            |
| .5074          | 85 5011            | 7365         | 4524         | 7 1065                   | 2 5585               | .4926            |
| .5075          | 88 0082            | 7178         | 4375         | 6 5176                   | 3 1244               | .4925            |
| .5076          | 90 5153            | 6989         | 4224         | 5 9285                   | 3 6903               | .4924            |
| .5077          | 93 0224            | 6797         | 4071         | 5 3393                   | 4 2559               | .4923            |
| .5078          | 95 5295            | 6603         | 3916         | 4 7499                   | 4 8214               | .4922            |
| .5079          | .0198 0366         | 6406         | 3759         | 4 1604                   | 5 3868               | .4921            |
| .5080          | .0200 5437         | .3988 6207   | .4999 3600   | .8613 5707               | .8705 9520           | .4920            |
| .5081          | 03 0508            | 6005         | 3439         | 2 9808                   | 6 5170               | .4919            |
| .5082          | 05 5580            | 5800         | 3276         | 2 3908                   | 7 0819               | .4918            |
| .5083          | 08 0652            | 5594         | 3111         | 1 8007                   | 7 6467               | .4917            |
| .5084          | 10 5723            | 5384         | 2943         | 1 2104                   | 8 2113               | .4916            |
| .5085          | 13 0795            | 5173         | 2774         | 0 6199                   | 8 7757               | .4915            |
| .5086          | 15 5867            | 4958         | 2603         | .8610 0293               | 9 3400               | .4914            |
| .5087          | 18 0939            | 4741         | 2430         | .8609 4385               | .8709 9042           | .4913            |
| .5088<br>.5089 | 20 6012<br>23 1084 | 4522<br>4300 | 2255<br>2078 | 8 8475<br>8 <b>2</b> 564 | .8710 4682<br>1 0320 | .4912<br>.4911   |
| .5090          | .0225 6157         | .3988 4076   | .4999 1899   | .8607 6652               | .8711 5957           | .4910            |
| .5091          | 28 1230            | 3849         | 1718         | 7 0738                   | 2 1593               | .4909            |
| .5092          | 30 6302            | 3620         | 1535         | 6 4822                   | 2 7227               | .4908            |
| .5093          | 33 1375            | 3388         | 1350         | 5 8905                   | 3 2859               | . 4907           |
| .5094          | 35 6449            | 3153         | 1163         | 5 2986                   | 3 8490               | . 4906           |
| .5095          | 38 1522            | 2916         | 0974         | 4 7066                   | 4 4119               | .4905            |
| .5096          | 40 6595            | 2677         | 0783         | 4 1144                   | 4 9747               | .4904            |
| .5097          | 43 1669            | 2435         | 0590         | 3 5220                   | 5 5373               | .4903            |
| .5098          | 45 6743            | 2191         | 0395         | 2 9295                   | 6 0998               | .4902            |
| .5099          | 48 1817            | 1944         | .4999 0198   | 2 3368                   | 6 6621               | .4901            |
| .5100          | .0250 6891         | .3988 1694   | .4998 9999   | .8601 7440               | .8717 2243           | .4900            |

 $E^{-1}$  =  $E^{1}$  = .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.5100 .4900

| .5100          |                    |              |              |                  |                  | .4900            |
|----------------|--------------------|--------------|--------------|------------------|------------------|------------------|
| P              | x                  | z            | √pq          | $\sqrt{1-p^2}$   | $\sqrt{1-q^2}$   | q                |
| .5100          | .0250 6891         | .3988 1694   | .4998 9999   | .8601 7440       | .8717 2243       | .4900            |
| .5101          | 53 1965            | 1442         | 9798         | 1 1510           | 7 7864           | .4899            |
| .5102          | <b>55 7039</b>     | 1188         | 9595         | .8600 5579       | 8 3482           | .4898            |
| .5103          | 58 2114            | 0931         | 9390         | .8599 9646       | 8 9100           | .4897            |
| .5104          | 60 7189            | 0671         | 9183         | 9 3711           | .8719 4715       | .4896            |
| .5105          | 63 2264            | 0409         | 8974         | 8 7775           | .8720 0330       | .4895            |
| .5106          | 65 7339            | .3988 0145   | 8763         | 8 1838           | 0 5942           | .4894            |
| .5107          | 68 2414            | .3987 9878   | 8550         | 7 5898           | 1 1554           | .4893            |
| .5108          | 70 7489            | 9608<br>9336 | 8335         | 6 9958           | 1 7163<br>2 2772 | .4892            |
| .5109          | 73 2565            | 9336         | 8118         | 6 4015           |                  | .4891            |
| .5110          | .0275 7641         | .3987 9062   | .4998 7899   | .8595 8071       | .8722 8378       | .4890            |
| .5111          | 78 2716            | 8785         | 7677         | 5 2126           | 3 3984           | .4889            |
| .5112          | 80 7793<br>83 2869 | 8505<br>8223 | 7454<br>7229 | 4 6179<br>4 0230 | 3 9587<br>4 5190 | . 4888<br>. 4887 |
| .5113          |                    |              |              |                  |                  | i i              |
| .5114<br>.5115 | 85 7945<br>88 3022 | 7939<br>7652 | 7002<br>6773 | 3 4280<br>2 8328 | 5 0790<br>5 6389 | .4886<br>.4885   |
| .5116          | 90 8099            | 7362         | 6542         | 2 2374           | 6 1987           | .4884            |
| .5117          | 93 3176            | 7070         | 6309         | 1 6419           | 6 7583           | . 4883           |
| .5118          | 95 8253            | 6776         | 6074         | 1 0463           | 7 3178           | .4882            |
| .5119          | .0298 3330         | 6479         | 5837         | .8590 4505       | 7 8771           | .4881            |
| .5120          | .0300 8408         | .3987 6179   | .4998 5598   | .8589 8545       | .8728 4363       | .4880            |
| .5121          | 03 3485            | 5877         | 5357         | 9 2583           | 8 9953           | .4879            |
| .5122          | 05 8563            | 5572         | 5114         | 8 6621           | .8729 5542       | .4878            |
| .5123          | 08 3641            | 5265         | 4869         | 8 0656           | .8730 1129       | .4877            |
| .5124          | 10 8720            | 4956         | 4622         | 7 4690           | 0 6715           | .4876            |
| .5125          | 13 3798            | 4643         | 4373         | 6 8722           | 1 2299           | .4875            |
| .5126          | 15 8877            | 4329         | 4121         | 6 2753           | 1 7881           | .4874            |
| .5127          | 18 3956            | 4012         | 3868         | 5 6782           | 2 3462           | .4873            |
| .5128<br>.5129 | 20 9035<br>23 4114 | 3692<br>3370 | 3613<br>3356 | 5 0810<br>4 4836 | 2 9042<br>3 4620 | .4872<br>.4871   |
| .5130          | .0325 9194         | .3987 3045   | .4998 3097   | .8583 8861       | .8734 0197       | .4870            |
|                | <del></del>        |              |              | 3 2884           | 4 5772           | .4869            |
| .5131<br>.5132 | 28 4273<br>30 9353 | 2718<br>2388 | 2836<br>2573 | 2 6905           | 5 1346           | .4868            |
| .5133          | 33 4433            | 2056         | 2308         | 2 0925           | 5 6918           | .4867            |
| .5134          | 35 9514            | 1721         | 2041         | 1 4943           | 6 2489           | .4866            |
| .5135          | 38 4594            | 1384         | 1772         | 0 8959           | 6 8058           | .4865            |
| .5136          | 40 9675            | 1044         | 1501         | .8580 2974       | 7 3625           | .4864            |
| .5137          | 43 4756            | 0702         | 1227         | .8579 6988       | 7 9191           | .4863            |
| .5138          | 45 9837            | 0358         | 0952         | 9 1000           | 8 4756           | .4862            |
| .5139          | 48 4919            | .3987 0010   | 0675         | 8 5010           | 9 0319           | .4861            |
| .5140          | .0351 0000         | .3986 9661   | .4998 0396   | .8577 9018       | .8739 5881       | .4860            |
| .5141          | 53 5082            | 9308         | .4998 0115   | 7 3025           | .8740 1441       | .4859            |
| .5142          | 56 0164            | 8954         | .4997 9832   | 6 7031           | 0 7000           | .4858            |
| .5143          | 58 5246            | 8596         | 9547         | 6 1035           | 1 2557           | .4857            |
| .5144          | 61 0329            | 8236         | 9260         | 5 5037           | 1 8113           | .4856            |
| .5145          | 63 5412<br>66 0495 | 7874<br>7509 | 8971<br>8679 | 4 9038<br>4 3037 | 2 3667<br>2 9219 | .4855<br>.4854   |
| ı              | 1                  | 1            | 1            |                  |                  | l                |
| .5147          | 68 5578            | 7142         | 8386         | 3 7035           | 3 4771<br>4 0320 | .4853            |
| .5149          | 71 0661<br>73 5745 | 6772<br>6400 | 8091<br>7794 | 3 1031<br>2 5025 | 4 0320<br>4 5868 | .4852<br>.4851   |
| .5150          | .0376 0829         | .3986 6025   | .4997 7495   | .8571 9018       | .8745 1415       | .4850            |
| .0100          | 1 .03/0 0029       | 1 .3700 0023 | 1 .777/ /77) | סוטע וונס. ו     | (141 (4/0.       | 1.4000           |

 $E^{-il} = E^{il} = 0000,0000 + .0000,0000$ 

| P              | x                     | z                        | √pq                | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q                |
|----------------|-----------------------|--------------------------|--------------------|----------------------|------------------|------------------|
| .5150          | .0376 0829            | .3986 6025               | .4997 7495         | .8571 9018           | .8745 1415       | .4850            |
| .5151          | 78 5913               | 5648                     | 7194               | 1 3009               | 5 6960           | .4849            |
| .5152<br>.5153 | 81 0997<br>83 6082    | 5268                     | 6891               | 0 6999               | 6 2504           | .4848            |
| 1 1            |                       | 4886                     | 6586               | .8570 0987           | 6 8046           | .4847            |
| .5154<br>.5155 | 86 1167<br>88 6252    | 4501<br>4113             | 6278<br>5969       | .8569 4973<br>8 8958 | 7 3587<br>7 9126 | .4846<br>.4845   |
| .5156          | 91 1337               | 3724                     | 5658               | 8 2941               | 8 4664           | .4844            |
| .5157          | 93 6423               | 3331                     | 5345               | 7 6923               | 9 0200           | .4843            |
| .5158<br>.5159 | 96 1509<br>.0398 6595 | 2936                     | 5030               | 7 0903               | .8749 5735       | .4842            |
|                |                       | 2539                     | 4713               | 6 4881               | .8750 1268       | .4841            |
| .5160          | .0401 1681            | .3986 2139               | .4997 4393         | .8565 8858           | .8750 6800       | .4840            |
| .5161<br>.5162 | 03 6768<br>06 1854    | 1736<br>1332             | 4072<br>3749       | 5 2834<br>4 6807     | 1 2330<br>1 7859 | .4839<br>.4838   |
| .5163          | 08 6942               | 0924                     | 3424               | 4 0779               | 2 3386           | .4837            |
| .5164          | 11 2029               | 0514                     | 3097               | 3 4750               | 2 8912           | .4836            |
| .5165<br>.5166 | 13 7117<br>16 2204    | .3986 0102<br>.3985 9687 | 2768<br>2436       | 2 8719<br>2 2686     | 3 4436<br>3 9959 | .4835            |
| .5167          | 18 7293               |                          |                    |                      |                  | .4834            |
| .5168          | 21 2381               | 9269<br>8849             | 2103<br>1768       | 1 6652<br>1 0616     | 4 5480<br>5 1000 | .4833<br>.4832   |
| .5169          | 23 7470               | 8427                     | 1431               | .8560 4579           | 5 6518           | .4831            |
| .5170          | .0426 2559            | .3985 8002               | .4997 1092         | .8559 8540           | .8756 2035       | .4830            |
| .5171          | 28 7648               | 7574                     | 0750               | 9 2499               | 6 7550           | . 4829           |
| .5172          | 31 2737<br>33 7827    | 7144<br>6712             | 0407<br>.4997 0062 | 8 6457<br>8 0413     | 7 3064<br>7 8577 | . 4828<br>. 4827 |
| .5174          | 36 2917               | Į                        |                    |                      |                  | Į.               |
| .5175          | 36 2917<br>38 8007    | 6277<br>5839             | .4996 9715<br>9366 | 7 4368<br>6 8321     | 8 4088<br>8 9597 | .4826<br>.4825   |
| .5176          | 41 3098               | 5399                     | 9014               | 6 2272               | .8759 5105       | .4824            |
| .5177          | 43 8189               | 4957                     | 8661               | 5 6222               | .8760 0611       | .4823            |
| .5178<br>.5179 | 46 3280<br>48 8371    | 4511<br>4064             | 8306<br>7949       | 5 0170<br>4 4117     | 0 6116<br>1 1620 | . 4822<br>. 4821 |
| .5180          | .0451 3463            | .3985 3614               | .4996 7589         | .8553 8062           | .8761 7122       | .4820            |
| .5181          | 53 8555               | 3161                     | 7228               | 3 2005               | 2 2622           | .4819            |
| .5182          | 56 3647               | 2706                     | 6865               | 2 5947               | 2 8121           | .4818            |
| .5183          | 58 8740               | 2248                     | 6500               | 1 9887               | 3 3619           | .4817            |
| .5184          | 61 3832               | 1788                     | 6133               | 1 3826               | 3 9115           | .4816            |
| .5185<br>.5186 | 63 8926<br>66 4019    | 1326<br>0861             | 5763<br>5392       | 0 7763<br>.8550 1698 | 4 4609<br>5 0102 | .4815<br>.4814   |
| .5187          | 68 9113               | .3985 0393               | 5019               | .8549 5632           | 5 5594           | .4813            |
| .5188          | 71 4207               | .3984 9923               | 4644               | 8 9564               | 6 1084           | .4812            |
| .5189          | 73 9301               | 9450                     | 4266               | 8 3495               | 6 6572           | .4811            |
| .5190          | .0476 4396            | .3984 8975               | .4996 3887         | .8547 7424           | .8767 2059       | .4810            |
| .5191          | 78 9490               | 8497                     | 3506               | 7 1351               | 7 7545           | .4809            |
| .5192<br>.5193 | 81 4586<br>83 9681    | 8017<br>7534             | 3122<br>2737       | 6 5277<br>5 9201     | 8 3029<br>8 8512 | . 4808<br>. 4807 |
| .5194          | 86 4777               | 7049                     | 2350               | 5 3124               | 9 3993           | . 4806           |
| .5195          | 88 9873               | 6561                     | 1961               | 4 7045               | .8769 9473       | .4805            |
| .5196          | 91 4970               | 6071                     | 1569               | 4 0964               | .8770 4951       | .4804            |
| .5197          | 94 0066               | 5578<br>5093             | 1176               | 3 4882<br>2 8798     | 1 0428<br>1 5903 | .4803<br>.4802   |
| .5198<br>.5199 | 96 5163<br>.0499 0261 | 5083<br>4585             | 0781<br>.4996 0383 | 2 2713               | 2 1377           | .4801            |
| .5200          | .0501 5358            | .3984 4085               | .4995 9984         | .8541 6626           | .8772 6849       | .4800            |

TABLE I

.5200 .4800

| P      | x          | z          | √pq          | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|--------|------------|------------|--------------|----------------|----------------|-------|
| .5200  | .0501 5358 | .3984 4085 | .4995 9984   | .8541 6626     | .8772 6849     | .4800 |
| .5201  | 04 0456    | 3582       | 9583         | 1 0537         | 3 2320         | .4799 |
| .5202  | 06 5555    | 3077       | 9179         | .8540 4447     | 3 7789         | .4798 |
| .5203  | 09 0653    | 2569       | 8774         | .8539 8355     | 4 3257         | .4797 |
| .5204  | 11 5752    | 2059       | 8367         | 9 2262         | 4 8723         | .4796 |
| .5205  | 14 0851    | 1546       | 7957         | 8 6167         | 5 4188         | .4795 |
| .5206  | 16 5951    | 1031       | 7546         | 8 0070         | 5 9651         | .4794 |
| .5207  | 19 1051    | .3984 0513 | 7133         | 7 3972         | 6 5113         | .4793 |
| .5208  | 21 6151    | .3983 9992 | 6717         | 6 7872         | 7 0574         | .4792 |
| .5209  | 24 1252    | 9470       | 6300         | 6 1771         | 7 6033         | .4791 |
| .5210  | .0526 6353 | .3983 8944 | .4995 5881   | .8535 5668     | .8778 1490     | .4790 |
| .5211  | 29 1454    | 8416       | 5459         | 4 9563         | 8 6946         | .4789 |
| .5212  | 31 6555    | 7886       | 5036         | 4 3457         | 9 2401         | .4788 |
| .5213  | 34 1657    | 7353       | 4610         | 3 7349         | .8779 7854     | .4787 |
| .5214  | 36 6760    | 6817       | 4183         | 3 1239         | .8780 3305     | .4786 |
| .5215  | 39 1862    | 6280       | 3754         | 2 5128         | 0 8755         | .4785 |
| .5216  | 41 6965    | 5739       | 3322         | 1 9015         | 1 4204         | .4784 |
| .5217  | 44 2068    | 5196       | 2889         | 1 2901         | 1 9651         | .4783 |
| .5218  | 46 7172    | 4651       | 2453         | 0 6785         | 2 5097         | .4782 |
| .5219  | 49 2276    | 4103       | 2016         | .8530 0668     | 3 0541         | .4781 |
| .5220  | .0551 7380 | .3983 3552 | .4995 1577   | .8529 4548     | .8783 5984     | .4780 |
| .5221  | 54 2485    | 2999       | 1135         | 8 8428         | 4 1425         | .4779 |
| .5222  | 56 7590    | 2444       | 0692         | 8 2305         | 4 6864         | .4778 |
| .5223  | 59 2695    | 1886       | .4995 0246   | 7 6181         | 5 2303         | .4777 |
| .5224  | 61 7801    | 1325       | .4994 9799   | 7 0056         | 5 7740         | .4776 |
| .5225  | 64 2907    | 0762       | 9349         | 6 3928         | 6 3175         | .4775 |
| .5226  | 66 8013    | .3983 0197 | 8898         | 5 7800         | 6 8609         | .4774 |
| .5227  | 69 3120    | .3982 9629 | 8444         | 5 1669         | 7 4041         | .4773 |
| .5228  | 71 8227    | 9058       | 7989         | 4 5537         | 7 9472         | .4772 |
| .5229  | 74 3335    | 8485       | 7531         | 3 9403         | 8 4901         | .4771 |
| .5230  | .0576 8443 | .3982 7909 | .4994 7072   | .8523 3268     | .8789 0329     | .4770 |
| .5231  | 79 3551    | 7331       | 6610         | 2 7131         | .8789 5756     | .4769 |
| .5232  | 81 8659    | 6751       | 6147         | 2 0993         | .8790 1181     | .4768 |
| .5233  | 84 3768    | 6168       | 5681         | 1 4853         | 0 6604         | .4767 |
| .5234  | 86 8878    | 5582       | 5214         | 0 8711         | 1 2026         | .4766 |
| .5235  | 89 3987    | 4994       | 4744         | .8520 2567     | 1 7447         | .4765 |
| .5236  | 91 9097    | 4403       | 4273         | .8519 6422     | 2 2866         | .4764 |
| .5237  | 94 4208    | 3810       | 3799         | 9 0276         | 2 8284         | .4763 |
| .5238  | 96 9318    | 3214       | 3324         | 8 4128         | 3 3700         | .4762 |
| .5239  | .0599 4430 | 2616       | 2846         | 7 7978         | 3 9115         | .4761 |
| .5240  | .0601 9541 | .3982 2015 | .4994 2367   | .8517 1826     | .8794 4528     | .4760 |
| .5241  | 04 4653    | 1412       | 1885         | 6 5673         | 4 9940         | .4759 |
| .5242  | 06 9765    | 0806       | 1402         | 5 9519         | 5 5350         | .4758 |
| .5243  | 09 4878    | .3982 0198 | 0916         | 5 3362         | 6 0759         | .4757 |
| .5244  | 11 9991    | .3981 9587 | .4994 0429   | 4 7204         | 6 6166         | .4756 |
| .5245  | 14 5105    | 8974       | .4993 9939   | 4 1045         | 7 1572         | .4755 |
| .5246  | 17 0218    | 8358       | 9447         | 3 4884         | 7 6977         | .4754 |
| .5247  | 19 5333    | 7740       | 8954         | 2 8721         | 8 2379         | .4753 |
| .5248  | 22 0447    | 7119       | 8458         | 2 2556         | 8 7781         | .4752 |
| .5249  | 24 5562    | 6496       | <b>796</b> 1 | 1 6390         | 9 3181         | .4751 |
| . 5250 | .0627 0678 | .3981 5870 | .4993 7461   | .8511 0223     | .8799 8580     | .4750 |

 $E^{-1}L = E^{1}L = .0000,0000+ .0000,000+ .0000,000+ .0000,000+ .00000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .00000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .00000+ .0000,000+ .000000+ .000000+ .000000+ .00000+ .000000+ .00000$ 

| P              | x                              | z                        | √pq          | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$           | q                |
|----------------|--------------------------------|--------------------------|--------------|----------------------|--------------------------|------------------|
| .5250          | .0627 0678                     | .3981 5870               | .4993 7461   | .8511 0223           | .8799 8580               | .4750            |
| .5251          | 29 5794                        | 5242                     | 6959         | .8510 4053           | .8800 3977               | .4749            |
| .5252          | 32 0910                        | 4611                     | 6456         | .8509 7882           | 0 9372                   | .4748            |
| .5253          | 34 6026                        | 3978                     | 5950         | 9 1710               | 1 4766                   | .4747            |
| .5254          | 37 1143                        | 3342                     | 5442         | 8 5536               | 2 0159                   | .4746            |
| .5255          | 39 6261                        | 2704                     | 4933         | 7 9360               | 2 5550                   | .4745            |
| .5256          | 42 1379                        | 2063                     | 4421         | <b>7</b> 3183        | 3 0940                   | .4744            |
| .5257          | 44 6497                        | 1419                     | 3907         | 6 7004               | 3 6328                   | .4743            |
| .5258          | 47 1615                        | 0773                     | 3392         | 6 0823               | 4 1715                   | .4742            |
| .5259          | 49 6735                        | .3981 0125               | 2874         | 5 4641               | 4 7100                   | .4741            |
| .5260          | .0652 1854                     | .3980 9474               | .4993 2354   | .8504 8457           | .8805 2484               | .4740            |
| .5261          | 54 6974                        | 8821                     | 1833         | 4 2271               | 5 7867                   | .4739            |
| .5262          | 57 2094                        | 8165                     | 1309         | 3 6084               | 6 3248                   | .4738            |
| .5263          | 59 7215                        | 7506                     | 0783         | 2 9895               | 6 8627                   | .4737            |
| .5264          | 62 2336                        | 6845                     | .4993 0255   | 2 3705               | 7 4005                   | .4736            |
| .5265<br>.5266 | 64 7457<br>67 2579             | 6182                     | .4992 9726   | 1 7513               | 7 9382                   | .4735            |
|                |                                | 5516                     | 9194         | 1 1319               | 8 4757                   | .4734            |
| .5267<br>.5268 | 69 7702<br>72 2824             | 4847                     | 8660         | .8500 5124           | 9 0131                   | .4733            |
| .5269          | 72 202 <del>4</del><br>74 7948 | 4176<br>3503             | 8124<br>7587 | .8499 8927<br>9 2729 | .8809 5503<br>.8810 0873 | .4732<br>.4731   |
| .5270          | .0677 3071                     |                          |              |                      |                          |                  |
|                |                                | .3980 2827               | .4992 7047   | .8498 6528           | .8810 6243               | .4730            |
| .5271<br>.5272 | 79 8195<br>82 3320             | 2148                     | 6505         | 8 0327               | 1 1610                   | .4729            |
| .5273          | 84 8445                        | 1467<br>0783             | 5961<br>5415 | 7 4123<br>6 7918     | 1 6977<br>2 2342         | .4728<br>.4727   |
|                |                                | .3980 0097               | 1            |                      |                          |                  |
| .5274<br>.5275 | 87 3570<br>89 8696             | .3979 9409               | 4868<br>4318 | 6 1711<br>5 5503     | 2 7705<br>3 3067         | .4726<br>.4725   |
| .5276          | 92 3822                        | 8717                     | 3766         | 4 9293               | 3 8427                   | .4724            |
| .5277          | 94 8949                        | 8024                     | 3212         | 4 3082               | 4 3787                   | .4723            |
| .5278          | 97 4076                        | 7328                     | 2656         | 3 6868               | 4 9144                   | .4722            |
| .5279          | .0699 9203                     | 6629                     | 2098         | 3 0653               | 5 4500                   | .4721            |
| . 5280         | .0702 4331                     | .3979 5928               | .4992 1538   | .8492 4437           | .8815 9855               | .4720            |
| .5281          | 04 9460                        | 5224                     | 0977         | 1 8219               | 6 5208                   | .4719            |
| .5282          | 07 4589                        | 4518                     | .4992 0413   | 1 1999               | 7 0560                   | .4718            |
| .5283          | 09 9718                        | 3809                     | .4991 9847   | .8490 5778           | 7 5910                   | .4717            |
| .5284          | 12 4848                        | 3098                     | 9279         | .8489 9555           | 8 1259                   | .4716            |
| .5285          | 14 9978                        | 2384                     | 8709         | 9 3330               | 8 6606                   | .4715            |
| .5286          | 17 5109                        | 1668                     | 8137         | 8 7104               | 9 1952                   | .4714            |
| .5287          | 20 0240                        | 0949                     | 7563         | 8 0876               | .8819 7296               | .4713            |
| .5288<br>.5289 | 22 5371<br>25 0503             | .3979 0228<br>.3978 9504 | 6987<br>6409 | 7 4646<br>6 8415     | .8820 2639<br>0 7981     | .4712<br>.4711   |
|                |                                | .3978 8778               |              | .8486 2182           | .8821 3321               |                  |
| .5290          | .0727 5636                     |                          |              |                      |                          | .4710            |
| .5291<br>.5292 | 30 0769<br>32 5902             | 8049<br>7318             | 5247<br>4663 | 5 5948<br>4 9712     | 1 8660<br>2 3997         | . 4709<br>. 4708 |
| .5292          | 35 1036                        | 6584                     | 4077         | 4 3474               | 2 9332                   | .4707            |
| .5294          | 37 6170                        | 5847                     | 3489         | 3 7235               | 3 4667                   | .4706            |
| .5295          | 40 1305                        | 5109                     | 2899         | 3 0994               | 3 9999                   | .4705            |
| .5296          | 42 6440                        | 4367                     | 2307         | 2 4751               | 4 5331                   | .4704            |
| .5297          | <b>45</b> 1576                 | 3623                     | 1713         | 1 8507               | 5 0661                   | . 4703           |
| .5298          | 47 6712                        | 2877                     | 1117         | 1 2261               | 5 5989                   | . 4702           |
| .5299          | 50 1849                        | 2128                     | .4991 0519   | .8480 6013           | 6 1316                   | . 4701           |
| .5300          | .0752 6986                     | .3978 1377               | .4990 9919   | .8479 9764           | .8826 6641               | .4700            |

E-11 E1 - 0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.5300 .4700

| P              | x                  | z                        | √pq                      | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q                |
|----------------|--------------------|--------------------------|--------------------------|--------------------------|----------------------|------------------|
| .5300          | .0752 6986         | .3978 1377               | .4990 9919               | .8479 9764               | .8826 6641           | .4700            |
| .5301          | 55 2124            | .3978 0623               | 9317                     | 9 3513                   | 7 1966               | .4699            |
| .5302          | 57 7262            | .3977 9866               | 8713                     | 8 7261                   | 7 7288               | .4698            |
| .5303          | 60 2401            | 9107                     | 8107                     | 8 1007                   | 8 2609               | .4697            |
| .5304          | 62 6540            | 8346                     | 7498                     | 7 4751                   | 8 7929               | .4696            |
| .5305          | 65 2679            | 7582                     | 6888                     | 6 8494                   | 9 3247               | .4695            |
| .5306          | 67 7819            | 6815                     | 6276                     | 6 2235                   | .8829 8564           | .4694            |
| .5307          | 70 2960            | 6046                     | 5662                     | 5 5974                   | .8830 3879           | .4693            |
| .5308<br>.5309 | 72 8101<br>75 3242 | 5275<br>4500             | 5046<br>4428             | 4 9712<br>4 3448         | 0 9193<br>1 4506     | .4692<br>.4691   |
|                |                    |                          |                          |                          |                      |                  |
| .5310          | .0777 8384         | .3977 3724               | .4990 3807               | .8473 7182               | .8831 9817           | .4690            |
| .5311          | 80 3527            | 2945                     | 3185                     | 3 0915                   | 2 5126               | .4689            |
| .5312<br>.5313 | 82 8670<br>85 3813 | 2163<br>1379             | 2561<br>1935             | 2 4646<br>1 8375         | 3 0434<br>3 5741     | . 4688<br>. 4687 |
|                |                    |                          |                          |                          |                      |                  |
| .5314<br>.5315 | 87 8957<br>90 4101 | .3977 0592<br>.3976 9803 | 1307<br>0676             | 1 2103<br>.8470 5829     | 4 1046<br>4 6350     | .4686<br>.4685   |
| .5316          | 92 9246            | 9012                     | .4990 0044               | .8469 9554               | 5 1652               | .4684            |
| .5317          | 95 4392            | 8217                     | .4989 9410               | 9 3277                   | 5 6953               | .4683            |
| .5318          | .0797 9538         | 7421                     | 8774                     | 8 6998                   | 6 2252               | .4682            |
| .5319          | .0800 4684         | 6621                     | 8135                     | 8 0717                   | 6 7550               | .4681            |
| .5320          | .0802 9831         | .3976 5820               | .4989 7495               | .8467 4435               | .8837 2847           | .4680            |
| .5321          | 05 4979            | 5016                     | 6853                     | 6 8152                   | 7 8142               | .4679            |
| .5322          | 08 0127            | 4209                     | 6208                     | 6 1866                   | 8 3435               | .4678            |
| .5323          | 10 5275            | 3399                     | 5562                     | 5 5579                   | 8 8727               | .4677            |
| .5324          | 13 0424            | 2588                     | 4914                     | 4 9291                   | 9 4018               | . 4676           |
| .5325          | 15 5574            | 1773                     | 4263                     | 4 3000                   | .8839 9307           | .4675            |
| .5226          | 18 0724            | 0957                     | 3611                     | 3 6708                   | .8840 4595           | .4674            |
| .5327          | 20 5874            | .3976 0137               | 2956                     | 3 0415                   | 0 9881               | .4673            |
| .5328<br>.5329 | 23 1025<br>25 6177 | .3975 9315<br>8491       | 2300<br>1642             | 2 4119<br>1 7823         | 1 5166<br>2 0450     | .4672<br>.4671   |
|                | .0828 1329         | .3975 7664               | .4989 0981               | .8461 1524               | .8842 5732           | .4670            |
| .5330          |                    |                          |                          |                          |                      |                  |
| .5331          | 30 6482<br>33 1635 | 6835<br>6003             | .4989 0319<br>.4988 9654 | .8460 5224<br>.8459 8922 | 3 1012<br>3 6291     | . 4669<br>. 4668 |
| .5332<br>.5333 | 35 6789            | 5168                     | 8988                     | 9 2618                   | 4 1569               | .4667            |
| .5334          | 38 1943            | 4332                     | 8319                     | 8 6313                   |                      | .4666            |
| .5335          | 38 1943<br>40 7098 | 3492                     | 7649                     | 8 0007                   | 4 6845<br>5 2120     | .4665            |
| .5336          | 43 2253            | 2650                     | 6976                     | 7 3698                   | 5 7393               | .4664            |
| .5337          | 45 7409            | 1806                     | 6302                     | 6 7388                   | 6 2665               | .4663            |
| .5338          | 48 2565            | 0959                     | 5625                     | 6 1076                   | 6 7935               | .4662            |
| .5339          | 50 7722            | .3975 0109               | 4947                     | 5 4763                   | 7 3204               | .4661            |
| .5340          | .0853 2879         | .3974 9257               | .4988 4266               | .8454 8448               | .8847 8472           | .4660            |
| .5341          | 55 8037            | 8403                     | 3583                     | 4 2131                   | 8 3738               | . 4659           |
| .5342          | 58 3196            | 7545                     | 2899                     | 3 5813                   | 8 9003               | .4658            |
| .5343          | 60 8355            | 6686                     | 2212                     | 2 9492                   | 9 4266               | .4657            |
| .5344          | 63 3515            | 5824                     | 1524                     | 2 3171                   | .8849 9528           | .4656            |
| .5345<br>.5346 | 65 8675<br>68 3835 | 4959<br>4092             | 0833<br>.4988 0140       | 1 6847<br>1 0522         | .8850 4788<br>1 0047 | .4655            |
|                |                    |                          | [                        |                          |                      | .4654            |
| .5347          | 70 8997<br>73 4159 | 3222<br>2350             | .4987 9446<br>8749       | .8450 4196<br>.8449 7867 | 1 5304               | .4653            |
| .5348<br>.5349 | 75 9321            | 1476                     | 8050                     | 9 1537                   | 2 0560<br>2 5815     | . 4652<br>. 4651 |
| .5350          |                    | .3974 0598               | .4987 7350               |                          |                      |                  |
| . 3380         | .0878 4484         | 1 .27/4 0270             | 1 .470/ /270             | .8448 5206               | .8853 1068           | .4650            |

 $\epsilon^{-1}$   $\epsilon^{1}$   $\epsilon^{1}$  .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| .5350                   |                               |                          |                            |                            |                            | .4650                   |
|-------------------------|-------------------------------|--------------------------|----------------------------|----------------------------|----------------------------|-------------------------|
| p                       | x                             | z                        | √pq                        | $\sqrt{1-p^2}$             | $\sqrt{1-q^2}$             | q                       |
| .5350                   | .0878 4484                    | .3974 0598               | .4987 7350                 | .8448 5206                 | .8853 1068                 | .4650                   |
| .5351                   | 80 9647                       | .3973 9719               | 6647                       | 7 8873                     | 3 6320                     | .4649                   |
| .5352                   | 83 4811                       | 8836                     | 5942                       | 7 2538                     | 4 1570                     | .4648                   |
| .5353                   | 85 9976                       | 7952                     | 5235                       | 6 6201                     | 4 6819                     | .4647                   |
| .5354                   | 88 5141                       | 7064                     | 4527                       | 5 9863                     | 5 2066                     | .4646                   |
| .5355                   | 91 0307                       | 6175                     | 3816                       | 5 3523                     | 5 7312                     | .4645                   |
| .5356                   | 93 5473                       | 5282                     | 3103                       | 4 7181                     | 6 2556                     | .4644                   |
| .5357                   | 96 0640                       | 4388                     | 2388                       | 4 0838                     | 6 7799                     | .4643                   |
| .5358                   | .0898 5807                    | 3490                     | 1671                       | 3 4493                     | 7 3041                     | .4642                   |
| .5359                   | .0901 0975                    | 2590                     | 0952                       | 2 8146                     | 7 8281                     | .4641                   |
| .5360                   | .0903 6144                    | .3973 1688               | .4987 0232                 | .8442 1798                 | .8858 3520                 | .4640                   |
| .5361                   | 06 1313                       | .3973 0783               | .4986 9509                 | 1 5448                     | 8 8757                     | .4639                   |
| .5362                   | 08 6483                       | .3972 9876               | 8784                       | 0 9097                     | 9 3993                     | .4638                   |
| .5363                   | 11 1653                       | 8966                     | 8057                       | .8440 2743                 | .8859 9227                 | .4637                   |
| .5364                   | 13 6824                       | 8054                     | 7328                       | .8439 6389                 | .8860 4460                 | .4636                   |
| .5365                   | 16 1995                       | 7139                     | 6597                       | 9 0032                     | 0 9692                     | .4635                   |
| .5366                   | 18 7167                       | 6221                     | 5864                       | 8 3674                     | 1 4922                     | .4634                   |
| .5367                   | 21 2340                       | 5301                     | 5129                       | 7 7314                     | 2 0151                     | .4633                   |
| .5368                   | 23 7513                       | 4379                     | 4392                       | 7 0952                     | 2 5378                     | .4632                   |
| .5369                   | 26 2687                       | 3454                     | 3653                       | 6 4589                     | 3 0604                     | .4631                   |
| .5370                   | .0928 7861                    | .3972 2526               | .4986 2912                 | .8435 8224                 | .8863 5828                 | .4630                   |
| .5371<br>.5372<br>.5373 | 31 3036<br>33 8211<br>36 3387 | .3972 0663<br>.3971 9728 | 2169<br>1424<br>.4986 0677 | 5 1858<br>4 5490<br>3 9120 | 4 1051<br>4 6272<br>5 1492 | .4629<br>.4628<br>.4627 |
| .5374                   | 38 8564                       | 8791                     | .4985 9928                 | 3 2748                     | 5 6711                     | .4626                   |
| .5375                   | 41 3741                       | 7851                     | 9177                       | 2 6375                     | 6 1928                     | .4625                   |
| .5376                   | 43 8919                       | 6908                     | 8424                       | 2 0000                     | 6 7144                     | .4624                   |
| .5377                   | 46 4098                       | 5963                     | 7668                       | 1 3623                     | 7 2358                     | .4623                   |
| .5378                   | 48 9277                       | 5015                     | 6911                       | 0 7245                     | 7 7571                     | .4622                   |
| .5379                   | 51 4457                       | 4065                     | 6152                       | .8430 0865                 | 8 2782                     | .4621                   |
| .5380                   | .0953 9637                    | .3971 3112               | .4985 5391                 | .8429 4484                 | .8868 7992                 | .4620                   |
| .5381                   | 56 4818                       | 2157                     | 4628                       | 8 8101                     | 9 3201                     | .4619                   |
| .5382                   | 58 9999                       | 1199                     | 3862                       | 8 1716                     | .8869 8408                 | .4618                   |
| .5383                   | 61 5181                       | .3971 0239               | 3095                       | 7 5329                     | .8870 3614                 | .4617                   |
| .5384                   | 64 0364                       | .3970 9276               | 2326                       | 6 8941                     | 0 8818                     | .4616                   |
| .5385                   | 66 5548                       | 8311                     | 1555                       | 6 2551                     | 1 4021                     | .4615                   |
| .5386                   | 69 0731                       | 7343                     | 0781                       | 5 6159                     | 1 9222                     | .4614                   |
| .5387                   | 71 5916                       | 6373                     | .4985 0006                 | 4 9766                     | 2 4422                     | .4613                   |
| .5388                   | 74 1101                       | 5400                     | .4984 9229                 | 4 3371                     | 2 9621                     | .4612                   |
| .5389                   | 76 6287                       | 4425                     | 8449                       | 3 6975                     | 3 4818                     | .4611                   |
| .5390                   | .0979 1473                    | .3970 3447               | .4984 7668                 | .8423 0576                 | .8874 0014                 | .4610                   |
| .5391                   | 81 6660                       | 2466                     | 6885                       | 2 4176                     | 4 5208                     | .4609                   |
| .5392                   | 84 1848                       | 1483                     | 6099                       | 1 7775                     | 5 0401                     | .4608                   |
| .5393                   | 86 7036                       | .3970 0498               | 5312                       | 1 1372                     | 5 5592                     | .4607                   |
| .5394                   | 89 2225                       | .3969 9510               | 4522                       | .8420 4967                 | 6 0782                     | .4606                   |
| .5395                   | 91 7415                       | 8520                     | 3731                       | .8419 8560                 | 6 5970                     | .4605                   |
| .5396                   | 94 2605                       | 7527                     | 2937                       | 9 2152                     | 7 1157                     | .4604                   |
| .5397                   | 96 7796                       | 6531                     | 2142                       | 8 5742                     | 7 6343                     | .4603                   |
| .5398                   | .0999 2987                    | 5533                     | 1344                       | 7 9330                     | 8 1527                     | .4602                   |
| .5399                   | .1001 8179                    | 4532                     | .4984 0545                 | 7 2917                     | 8 6710                     | .4601                   |
| .5400                   | .1004 3372                    | .3969 3529               | .4983 9743                 | .8416 6502                 | .8879 1892                 | .4600                   |

 $E^{-11} = E^{11} = 0000,0000 + .0000,0000$ 

.5400 .4600

| .5400          | •                  | 1                        | <b>√</b> -~        | J72                  | $\sqrt{1-q^2}$       | l                              |
|----------------|--------------------|--------------------------|--------------------|----------------------|----------------------|--------------------------------|
| <u> </u>       | <u> </u>           | Z                        | √pq                | $\sqrt{1-p^2}$       |                      | q                              |
| .5400          | .1004 3372         | .3969 3529               | .4983 9743         | .8416 6502           | .8879 1892           | .4600                          |
| .5401          | 06 8565            | 2524                     | 8940               | 6 0085               | .8879 7071           | .4599                          |
| .5402<br>.5403 | 09 3759<br>11 8954 | 1516<br>.3969 0505       | 8134<br>7326       | 5 3667<br>4 7247     | .8880 2250<br>0 7427 | .4598<br>.4597                 |
| 1              |                    | }                        |                    |                      |                      | ł                              |
| .5404<br>.5405 | 14 4149<br>16 9345 | .3968 9492<br>8476       | 6517<br>5705       | 4 0825<br>3 4401     | 1 2603<br>1 7777     | .4596<br>.4595                 |
| .5406          | 19 4542            | 7458                     | 4891               | 2 7976               | 2 2950               | .4594                          |
| .5407          | 21 9739            | 6437                     | 4076               | 2 1550               | 2 8121               | .4593                          |
| .5408          | 24 4937            | 5414                     | 3258               | 1 5121               | 3 3291               | .4592                          |
| .5409          | 27 0135            | 4388                     | 2438               | . 0 8691             | 3 8460               | .4591                          |
| .5410          | . 1029 5334        | .3968 3360               | .4983 1616         | .8410 2259           | .8884 3627           | .4590                          |
| .5411          | 32 0534            | 2329                     | .4983 0793         | .8409 5826           | 4 8792               | .4589                          |
| .5412          | 34 5735            | 1296<br>.3968 0260       | .4982 9967<br>9139 | 8 9391<br>8 2954     | 5 3957<br>5 9119     | . 4588<br>. 4587               |
| .5413          | 37 0936            |                          |                    |                      |                      |                                |
| .5414<br>.5415 | 39 6138<br>42 1340 | .3967 9222<br>8181       | 8309<br>7477       | 7 6515<br>7 0075     | 6 4281<br>6 9441     | . 4586<br>. 4585               |
| .5416          | 44 6543            | 7137                     | 6634               | 6 3633               | 7 4599               | .4584                          |
| .5417          | 47 1747            | 6092                     | 5808               | 5 7189               | 7 9756               | . 4583                         |
| .5418          | 49 6951            | 5043                     | 4970               | 5 0744               | 8 4912               | .4582                          |
| .5419          | 52 2156            | 3992                     | 4130               | 4 4297               | 9 0066               | .4581                          |
| .5420          | .1054 7362         | .3967 2939               | .4982 3288         | .8403 7849           | .8889 5219           | .4580                          |
| .5421          | 57 2569            | 1883                     | 2444               | 3 1398               | .8890 0371           | .4579                          |
| .5422<br>.5423 | 59 7776<br>62 2984 | .3967 0824<br>.3966 9763 | 1598<br>.4982 0750 | 2 4946<br>1 8493     | 0 5521<br>1 0669     | . 4578<br>. 4577               |
|                |                    | 1                        |                    |                      |                      |                                |
| .5424<br>.5425 | 64 8192<br>67 3401 | 8700<br>7634             | .4981 9900<br>9048 | 1 2037<br>.8400 5580 | 1 5816<br>2 0962     | . <b>4576</b><br>. <b>4575</b> |
| .5426          | 69 8611            | 6565                     | 8193               | .8399 9121           | 2 6106               | .4574                          |
| .5427          | 72 3821            | 5494                     | 7337               | 9 2661               | 3 1249               | .4573                          |
| .5428          | 74 9033            | 4420                     | 6479               | 8 6199               | 3 6391               | .4572                          |
| .5429          | 77 4244            | 3344                     | 5619               | 7 9735               | 4 1531               | .4571                          |
| .5430          | .1079 9457         | .3966 2265               | .4981 4757         | .8397 3270           | .8894 6669           | .4570                          |
| .5431          | 82 4670            | 1184                     | 3893               | 6 6802               | 5 1807               | . 4569                         |
| .5432<br>.5433 | 84 9884<br>87 5099 | .3966 0100<br>.3965 9014 | 3026<br>2158       | 6 0333<br>5 3863     | 5 6942<br>6 2077     | . 4568<br>. 4567               |
| 1              |                    | 1                        |                    |                      |                      |                                |
| .5434<br>.5435 | 90 0314<br>92 5530 | 7925<br>6834             | 1288<br>.4981 0416 | 4 7391<br>4 0917     | 6 7210<br>7 2341     | . 4566<br>. 4565               |
| .5436          | 95 0747            | 5740                     | .4980 9541         | 3 4441               | 7 7471               | .4564                          |
| .5437          | .1097 5964         | 4644                     | 8665               | 2 7964               | 8 2600               | . 4563                         |
| .5438          | .1100 1182         | 3545                     | 7787               | 2 1485               | 8 7727               | . 4562                         |
| .5439          | 02 6401            | 2444                     | 6906               | 1 5004               | 9 2853               | .4561                          |
| .5440          | .1105 1620         | .3965 1340               | .4980 6024         | .8390 8522           | .8899 7978           | .4560                          |
| .5441          | 07 6841            | .3965 0233               | 5139               | .8390 2038           | .8900 3101           | .4559                          |
| .5442<br>.5443 | 10 2061<br>12 7283 | .3964 9124<br>8013       | 4253<br>3364       | .8389 5552<br>8 9064 | 0 8222<br>1 3342     | .4558<br>.4557                 |
| 1              |                    | ĺ                        |                    |                      |                      |                                |
| .5444<br>.5445 | 15 2505<br>17 7728 | 6899<br>5782             | 2474<br>1581       | 8 2575<br>7 6084     | 1 8461<br>2 3578     | .4556<br>.4555                 |
| .5446          | 20 2952            | 4663                     | .4980 0687         | 6 9592               | 2 8694               | .4554                          |
| .5447          | 22 8176            | 3542                     | .4979 9790         | 6 3097               | 3 3809               | .4553                          |
| .5448          | 25 3402            | 2418                     | 8892               | 5 6601               | 3 8922               | .4552                          |
| .5449          | 27 8627            | 1291                     | 7991               | 5 0104               | 4 4033               | .4551                          |
| .5450          | .1130 3854         | .3964 0162               | .4979 7088         | .8384 3604           | .8904 9144           | .4550                          |

 $E^{-1}$   $E^{1}$   $E^{$ 

| P     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .5450 | .1130 3854 | .3964 0162 | .4979 7088 | .8384 3604     | .8904 9144     | .4550 |
| .5451 | 32 9081    | .3963 9030 | 6184       | 3 7103         | 5 4253         | .4549 |
| .5452 | 35 4309    | 7896       | 5277       | 3 0601         | 5 9360         | .4548 |
| .5453 | 37 9538    | 6760       | 4368       | 2 4096         | 6 4466         | .4547 |
| .5454 | 40 4768    | 5620       | 3457       | 1 7590         | 6 9571         | .4546 |
| .5455 | 42 9998    | 4479       | 2545       | 1 1082         | 7 4674         | .4545 |
| .5456 | 45 5229    | 3334       | 1630       | .8380 4573     | 7 9775         | .4544 |
| .5457 | 48 0460    | 2188       | .4979 0713 | .8379 8061     | 8 4876         | .4543 |
| .5458 | 50 5693    | .3963 1038 | .4978 9794 | 9 1548         | 8 9975         | .4542 |
| .5459 | 53 0926    | .3962 9886 | 8873       | 8 5034         | .8909 5072     | .4541 |
| .5460 | .1155 6160 | .3962 8732 | .4978 7950 | .8377 8518     | .8910 0168     | .4540 |
| .5461 | 58 1394    | 7575       | 7025       | 7 1999         | 0 5263         | .4539 |
| .5462 | 60 6630    | 6416       | 6098       | 6 5480         | 1 0356         | .4538 |
| .5463 | 63 1866    | 5254       | 5169       | 5 8958         | 1 5448         | .4537 |
| .5464 | 65 7102    | 4089       | 4238       | 5 2435         | 2 0539         | .4536 |
| .5465 | 68 2340    | 2922       | 3305       | 4 5910         | 2 5628         | .4535 |
| .5466 | 70 7578    | 1753       | 2370       | 3 9384         | 3 0715         | .4534 |
| .5467 | 73 2817    | .3962 0581 | 1433       | 3 2856         | 3 5801         | .4533 |
| .5468 | 75 8057    | .3961 9406 | .4978 0494 | 2 6326         | 4 0886         | .4532 |
| .5469 | 78 3298    | 8229       | .4977 9553 | 1 9794         | 4 5970         | .4531 |
| .5470 | .1180 8539 | .3961 7050 | .4977 8610 | .8371 3261     | .8915 1052     | .4530 |
| .5471 | 83 3781    | 5868       | 7665       | 0 6726         | 5 6132         | .4529 |
| .5472 | 85 9024    | 4683       | 6717       | .8370 0189     | 6 1211         | .4528 |
| .5473 | 88 4267    | 3496       | 5768       | .8369 3650     | 6 6289         | .4527 |
| .5474 | 90 9512    | 2306       | 4817       | 8 7110         | 7 1365         | .4526 |
| .5475 | 93 4757    | .3961 1114 | 3864       | 8 0568         | 7 6440         | .4525 |
| .5476 | 96 0002    | .3960 9919 | 2908       | 7 4025         | 8 1514         | .4524 |
| .5477 | .1198 5249 | 8722       | 1951       | 6 7479         | 8 6586         | .4523 |
| .5478 | .1201 0496 | 7522       | 0992       | 6 0932         | 9 1657         | .4522 |
| .5479 | 03 5745    | 6320       | .4977 0030 | 5 4384         | .8919 6726     | .4521 |
| .5480 | .1206 0993 | .3960 5115 | .4976 9067 | .8364 7833     | .8920 1794     | .4520 |
| .5481 | 08 6243    | 3908       | 8101       | 4 1281         | 0 6860         | .4519 |
| .5482 | 11 1493    | 2698       | 7134       | 3 4727         | 1 1925         | .4518 |
| .5483 | 13 6745    | 1485       | 6164       | 2 8172         | 1 6989         | .4517 |
| .5484 | 16 1997    | .3960 0270 | 5193       | 2 1614         | 2 2051         | .4516 |
| .5485 | 18 7249    | .3959 9053 | 4219       | 1 5055         | 2 7112         | .4515 |
| .5486 | 21 2503    | 7833       | 3243       | 0 8495         | 3 2171         | .4514 |
| .5487 | 23 7757    | 6610       | 2266       | .8360 -1932    | 3 7229         | .4513 |
| .5488 | 26 3012    | 5385       | 1286       | .8359 5368     | 4 2286         | .4512 |
| .5489 | 28 8268    | 4158       | .4976 0304 | 8 8802         | 4 7341         | .4511 |
| .5490 | .1231 3525 | .3959 2928 | .4975 9321 | .8358 2235     | .8925 2395     | .4510 |
| .5491 | 33 8782    | 1695       | 8335       | 7 5666         | 5 7447         | .4509 |
| .5492 | 36 4040    | .3959 0460 | 7347       | 6 9095         | 6 2498         | .4508 |
| .5493 | 38 9299    | .3958 9222 | 6357       | 6 2522         | 6 7548         | .4507 |
| .5494 | 41 4559    | 7982       | 5366       | 5 5948         | 7 2596         | .4506 |
| .5495 | 43 9820    | 6739       | 4372       | 4 9372         | 7 7643         | .4505 |
| .5496 | 46 5081    | 5494       | 3376       | 4 2794         | 8 2688         | .4504 |
| .5497 | 49 0343    | 4246       | 2378       | 3 6214         | 8 7732         | .4503 |
| .5498 | 51 5606    | 2996       | 1378       | 2 9633         | 9 2775         | .4502 |
| .5499 | 54 0870    | 1743       | .4975 0376 | 2 3050         | .8929 7816     | .4501 |
| .5500 | .1256 6135 | .3958 0488 | .4974 9372 | .8351 6465     | .8930 2855     | .4500 |

 $E^{-1}$   $E^{1}$   $E^{$ 

| p              | x                  | z                  | √pq          | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$   | q                |
|----------------|--------------------|--------------------|--------------|--------------------------|------------------|------------------|
| .5500          | .1256 6135         | .3958 0488         | .4974 9372   | .8351 6465               | .8930 2855       | .4500            |
| .5501          | 59 1400            | .3957 9230         | 8366         | 0 9879                   | 0 7894           | .4499            |
| .5502          | 61 6666            | 7970               | 7358         | .8350 3291               | 1 2931           | .4498            |
| .5503          | 64 1933            | 6707               | 6348         | .8349 6701               | 1 7966           | .4497            |
| .5504          | 66 7201            | 5441               | 5335         | 9 0110                   | 2 3000           | .4496            |
| .5505<br>.5506 | 69 2470<br>71 7739 | 4173<br>2903       | 4321<br>3305 | 8 3516<br>7 6921         | 2 8033<br>3 3064 | . 4495<br>. 4494 |
| .5507          | 74 3009            | 1630               | 2287         | 7 0325                   | 3 8094           | 4493             |
| .5508          | 76 8280            | .3957 0354         | 1267         | 6 3726                   | 4 3123           | .4492            |
| .5509          | 79 3552            | .3956 9076         | .4974 0244   | 5 7126                   | 4 8150           | .4491            |
| .5510          | .1281 8825         | .3956 7795         | .4973 9220   | .8345 0524               | .8935 3176       | .4490            |
| .5511          | 84 4098            | 6512               | 8194         | 4 3921                   | 5 8200           | . 4489           |
| .5512          | 86 9373            | 5227               | 7165         | 3 7315                   | 6 3223           | .4488            |
| .5513          | 89 4648            | 3938               | 6135         | 3 0708                   | 6 8244           | .4487            |
| .5514          | 91 9924            | 2648               | 5102         | 2 4100                   | 7 3264           | .4486            |
| .5515<br>.5516 | 94 5200<br>97 0478 | 1354<br>.3956 0059 | 4068<br>3031 | 1 7489<br>1 0877         | 7 8283<br>8 3300 | . 4485<br>. 4484 |
| .5517          | .1299 5757         | .3955 8760         | 1993         | .8340 4263               | 8 8316           | .4483            |
| .5518          | .1302 1036         | 7459               | .4973 0952   | .8339 7647               | 9 3331           | .4482            |
| .5519          | 04 6316            | 6156               | .4972 9910   | 9 1030                   | .8939 8344       | .4481            |
| .5520          | .1307 1597         | .3955 4850         | .4972 8865   | .8338 4411               | .8940 3356       | .4480            |
| .5521          | 09 6879            | 3542               | 7818         | 7 7790                   | 0 8366           | .4479            |
| .5522          | 12 2161            | 2231               | 6769         | 7 1168                   | 1 3375<br>1 8382 | .4478            |
| .5523          | 14 7445            | .3955 0917         | 5719         | 6 4543                   |                  | .4477            |
| .5524<br>.5525 | 17 2729<br>19 8014 | .3954 9601<br>8283 | 4666<br>3611 | 5 7917<br>5 1290         | 2 3388<br>2 8393 | .4476<br>.4475   |
| .5526          | 22 3300            | 6962               | 2554         | 4 4660                   | 3 3396           | .4474            |
| .5527          | 24 8587            | 5638               | 1495         | 3 8029                   | 3 8398           | .4473            |
| .5528          | 27 3874            | 4312               | .4972 0434   | 3 1396                   | 4 3399           | .4472            |
| .5529          | 29 9163            | 2983               | .4971 9371   | 2 4762                   | 4 8398           | .4471            |
| .5530          | .1332 4452         | .3954 1652         | .4971 8306   | .8331 8125               | .8945 3396       | .4470            |
| .5531          | 34 9743            | .3954 0318         | 7239         | 1 1487                   | 5 8392           | .4469            |
| .5532<br>.5533 | 37 5034<br>40 0326 | .3953 8982<br>7643 | 6170<br>5099 | .8330 4847<br>.8329 8206 | 6 3387<br>6 8380 | .4468<br>.4467   |
|                |                    | 6302               | 4026         | 9 1563                   | 7 3373           | .4466            |
| .5534<br>.5535 | 42 5618<br>45 0912 | 4958               | 2951         | 8 4918                   | 7 8363           | .4465            |
| .5536          | 47 6206            | 3612               | 1874         | 7 8271                   | 8 3353           | .4464            |
| .5537          | 50 1502            | 2263               | .4971 0795   | 7 1622                   | 8 8341           | .4463            |
| .5538          | 52 6798            | .3953 0912         | .4970 9713   | 6 4972                   | 9 3327           | .4462            |
| .5539          | 55 2095            | .3952 9558         | 8630         | 5 8320                   | .8949 8312       | .4461            |
| .5540          | .1357 7393         | .3952 8201         | .4970 7545   | .8325 1667               | .8950 3296       | .4460            |
| .5541          | 60 2692<br>62 7992 | 6842<br>5481       | 6457<br>5368 | 4 5011<br>3 8354         | 0 8278<br>1 3259 | .4459            |
| .5542<br>.5543 | 65 3292            | 4117               | 4276         | 3 1695                   | 1 8239           | .4458<br>.4457   |
| .5544          | 67 8594            | 2750               | 3183         | 2 5035                   | 2 3217           | .4456            |
| .5545          | 70 3896            | 1381               | 2087         | 1 8372                   | 2 8194           | .4455            |
| .5546          | 72 9199            | .3952 0009         | .4970 0990   | 1 1708                   | 3 3169           | .4454            |
| .5547          | 75 4503            | .3951 8635         | .4969 9890   | .8320 5043               | 3 8143           | .4453            |
| .5548          | 77 9808            | 7258               | 8789         | .8319 8375               | 4 3116           | .4452            |
| .5549          | 80 5114            | 5879               | 7685         | 9 1706                   | 4 8087           | .4451            |
| .5550          | .1383 0421         | .3951 4497         | .4969 6579   | .8318 5035               | .8955 3057       | .4450            |

TABLE I

.5550

.4450

|                |                    |                          |                          | 1000                        |                      | .445(          |
|----------------|--------------------|--------------------------|--------------------------|-----------------------------|----------------------|----------------|
| P              | x                  | Z                        | √pq                      | $\sqrt{1-p^2}$              | $\sqrt{1-q^2}$       | q              |
| .5550          | .1383 0421         | .3951 4497               | .4969 6579               | .8318 5035                  | .8955 3057           | .4450          |
| .5551          | 85 5728            | 3113                     | 5472                     | 7 8362                      | 5 8025               | .4449          |
| .5552<br>.5553 | 88 1037<br>90 6346 | 1726<br>.3951 0337       | 4362                     | 7 1687                      | 6 2992               | .4448          |
|                |                    | Į.                       | 3250                     | 6 5011                      | 6 7958               | .4447          |
| .5554<br>.5555 | 93 1657<br>95 6968 | .3950 8945<br>7550       | 2136                     | 5 8333                      | 7 2922               | .4446          |
| .5556          | .1398 2280         | 6154                     | .4969 1020<br>.4968 9902 | 5 1654<br>4 4972            | 7 7885<br>8 2847     | .4445<br>.4444 |
| .5557          | .1400 7593         | 4754                     |                          |                             |                      | ŀ              |
| .5558          | 03 2907            | 3352                     | 8782<br>7660             | 3 8289<br>3 1604            | 8 7807<br>9 2765     | .4443          |
| .5559          | 05 8221            | 1947                     | 6536                     | 2 4917                      | .8959 7723           | .4441          |
| .5560          | .1408 3537         | .3950 0540               | .4968 5410               | .8311 8229                  | .8960 2679           | .4440          |
| .5561          | 10 8854            | .3949 9131               | 4282                     | 1 1539                      | 0 7633               | .4439          |
| .5562          | 13 4171            | 7719                     | 3152                     | .8310 4847                  | 1 2586               | .4438          |
| .5563          | 15 9489            | 6304                     | 2020                     | .8309 8153                  | 1 7538               | .4437          |
| .5564          | 18 4809            | 4887                     | .4968 0886               | 9 1458                      | 2 2488               | .4436          |
| .5565<br>.5566 | 21 0129<br>23 5450 | 3467                     | .4967 9749               | 8 4761                      | 2 7437               | .4435          |
| 1              |                    | 2045                     | 8611                     | 7 8062                      | 3 2385               | .4434          |
| .5567<br>.5568 | 26 0772<br>28 6095 | .3949 0620               | 7471                     | 7 1361                      | 3 7331               | .4433          |
| .5569          | 31 1419            | .3948 9193<br>7763       | 6328<br>5184             | 6 4659<br>5 7955            | 4 2276<br>4 7219     | .4432<br>.4431 |
| .5570          | .1433 6744         | .3948 6330               | .4967 4037               | .8305 1249                  | .8965 2161           | .4430          |
| .5571          | 36 2069            |                          |                          |                             |                      |                |
| .5572          | 38 7396            | 4895<br>3458             | 2889<br>1738             | 4 4542<br>3 7832            | 5 7102<br>6 2041     | .4429<br>.4428 |
| .5573          | 41 2723            | 2018                     | .4967 0586               | 3 1121                      | 6 6979               | .4427          |
| .5574          | 43 8052            | .3948 0575               | .4966 9431               | 2 4408                      | 7 1915               | .4426          |
| .5575          | 46 3381            | .3947 9130               | 8275                     | 1 7694                      | 7 6850               | .4425          |
| .5576          | 48 8711            | 7683                     | 7116                     | 1 0978                      | 8 1784               | .4424          |
| .5577          | 51 4043            | 6232                     | 5955                     | .8300 4260                  | 8 6716               | .4423          |
| .5578<br>.5579 | 53 9375<br>56 4708 | 4780<br>3325             | 4792<br>3628             | .8299 <b>7540</b><br>9 0818 | 9 1647<br>.8969 6577 | .4422          |
|                | .1459 0042         |                          |                          | .8298 4095                  |                      | .4421          |
| .5580          |                    | .3947 1867               | .4966 2461               |                             | .8970 1505           | .4420          |
| .5581<br>.5582 | 61 5377<br>64 0713 | .3947 0407<br>.3946 8944 | 1292<br>.4966 0121       | 7 8370<br>7 1643            | 0 6432<br>1 1357     | .4419<br>.4418 |
| .5583          | 66 6050            | 7478                     | .4965 8948               | 6 4914                      | 1 6281               | .4417          |
| .5584          | 69 1388            | 6011                     | 7773                     | 5 8184                      | 2 1204               | .4416          |
| .5585          | 71 6726            | 4540                     | 6596                     | 5 1452                      | 2 6125               | .4415          |
| .5586          | 74 2066            | 3067                     | 5417                     | 4 4718                      | 3 1045               | .4414          |
| .5587          | 76 7407            | 1592                     | 4235                     | 3 7983                      | 3 5963               | .4413          |
| .5588          | 79 2748            | .3946 0114               | 3052                     | 3 0245                      | 4 0880               | .4412          |
| .5589          | 81 8091            | .3945 8633               | 1867                     | 2 3506                      | 4 5796               | .4411          |
| .5590          | .1484 3434         | .3945 7150               | .4965 0680               | .8291 6765                  | .8975 0710           | .4410          |
| .5591          | 86 8778            | 5665                     | .4964 9490               | 1 0023<br>.8290 3279        | 5 5623<br>6 0535     | .4409          |
| .5592          | 89 4124<br>91 9470 | 4176<br>2686             | 8299<br>7106             | .8290 3279<br>.8289 6532    | 6 5445               | .4408<br>.4407 |
|                |                    | j                        | 5910                     | 8 9785                      | 7 0354               | .4406          |
| .5594<br>.5595 | 94 4818<br>97 0166 | .3945 1192<br>.3944 9697 | 4713                     | 8 3035                      | 7 5261               | .4405          |
| .5596          | .1499 5515         | 8198                     | 3513                     | 7 6284                      | 8 0167               | .4404          |
| .5597          | .1502 0865         | 6698                     | 2312                     | 6 9531                      | 8 5072               | .4403          |
| .5598          | 04 6216            | 5194                     | .4964 1108               | 6 2776                      | 8 9975               | .4402          |
| .5599          | 07 1568            | 3688                     | .4963 9902               | 5 6019                      | 9 4877               | .4401          |
| .5600          | .1509 6922         | .3944 2180               | .4963 8695               | .8284 9261                  | .8979 9777           | .4400          |

E-1 E1 -0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| P              | x                     | z                        | √pq                      | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$           | q                |
|----------------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------|
| .5600          | .1509 6922            | .3944 2180               | .4963 8695               | .8284 9261               | .8979 9777               | .4400            |
| .5601<br>.5602 | 12 2276<br>14 7631    | .3944 0669<br>.3943 9155 | 7485<br>6273             | 4 2501<br>3 5739         | .8980 4676<br>0 9574     | .4399<br>.4398   |
| .5603          | 17 2987               | 7639                     | 5059                     | 2 8975                   | 1 4470                   | .4397            |
| .5604<br>.5605 | 19 8344<br>22 3702    | 6121<br>4600             | 3843<br>2625             | 2 2210<br>1 5442         | 1 9365<br>2 4259         | .4396<br>.4395   |
| .5606          | 24 9060               | 3076                     | 1405                     | 0 8673                   | 2 9151                   | .4394            |
| .5607          | 27 4420<br>29 9781    | 1550<br>.3943 0021       | .4963 0183<br>.4962 8959 | .8280 1903<br>.8279 5130 | 3 4042<br>3 8931         | .4393<br>.4392   |
| .5609          | 32 5143               | .3942 8490               | 7733                     | 8 8356                   | 4 3819                   | .4391            |
| .5610          | .1535 0506            | .3942 6956               | .4962 6505               | .8278 1580               | .8984 8706               | .4390            |
| .5611<br>.5612 | 37 5870<br>40 1235    | 5420<br>3881             | 5275<br>4043             | 7 4802<br>6 8023         | 5 3591<br>5 8475         | .4389<br>.4388   |
| .5613          | 42 6600               | 2340                     | 2808                     | 6 1242                   | 6 3358                   | .4387            |
| .5614<br>.5615 | 45 1967<br>47 7335    | .3942 0796<br>.3941 9249 | 1572<br>.4962 0334       | 5 4458<br>4 <b>76</b> 74 | 6 8239<br>7 3119         | .4386<br>.4385   |
| .5616          | 50 2704               | 7700                     | .4961 9093               | 4 0887                   | 7 7997                   | .4384            |
| .5617<br>.5618 | 52 8074<br>55 3444    | 6149<br>4595             | 7851<br>6606             | 3 4099<br>2 7309         | 8 2874<br>8 7750         | .4383<br>.4382   |
| .5619          | 57 8816               | 3038                     | 5360                     | 2 0517                   | 9 2624                   | . 4381           |
| .5620          | .1560 4189            | .3941 1479               | .4961 4111               | .8271 3723               | .8989 7497               | .4380            |
| .5621<br>.5622 | 62 9563<br>65 4938    | .3940 9917<br>8353       | 2860<br>1608             | 0 6928<br>.8270 0131     | .8990 2369<br>0 7239     | .4379<br>.4378   |
| .5623          | 68 0314               | 6786                     | .4961 0353               | .8269 3332               | 1 2108                   | .4377            |
| .5624<br>.5625 | 70 5691<br>73 1068    | 5217<br>3645             | .4960 9096<br>7837       | 8 6531<br>7 9728         | 1 6975<br>2 1841         | .4376<br>.4375   |
| .5626          | 75 6447               | 2071                     | 6576                     | 7 2924                   | 2 6706                   | .4374            |
| .5627<br>.5628 | 78 1827<br>80 7208    | .3940 0494<br>.3939 8914 | 5313<br>4048             | 6 6118<br>5 9310         | 3 1569<br>3 6431         | . 4373<br>. 4372 |
| .5629          | 83 2590               | 7332                     | 2781                     | 5 2501                   | 4 1291                   | .4371            |
| .5630          | .1585 7973            | .3939 5748               | .4960 1512               | .8264 5690               | .8994 6151               | .4370            |
| .5631<br>.5632 | 88 3357<br>90 8742    | 4161<br>2571             | .4960 0241<br>.4959 8968 | 3 8876<br>3 2062         | 5 1008<br>5 5865         | . 4369<br>. 4368 |
| .5633          | 93 4128               | .3939 0979               | 7692                     | 2 5245                   | 6 0720                   | . 4367           |
| .5634          | 95 9515<br>.1598 4903 | .3938 9384<br>7787       | 6415<br>5136             | 1 8427<br>1 1606         | 6 5573<br>7 0426         | . 4366<br>. 4365 |
| .5636          | .1601 0292            | 6187                     | 3854                     | .8260 4784               | 7 5277                   | .4364            |
| .5637          | 03 5682               | 4585                     | 2571                     | .8259 7961               | 8 0126                   | .4363            |
| .5638          | 06 1073<br>08 6466    | .3938 1373               | .4959 1286<br>.4958 9998 | 9 1135<br>8 4308         | 8 4974<br>8 9821         | . 4362<br>. 4361 |
| .5640          | .1611 1859            | .3937 9763               | .4958 8708               | .8257 7479               | .8999 4667               | .4360            |
| .5641          | 13 7253<br>16 2648    | 8150<br>6535             | 7417<br>6123             | 7 0648<br>6 3815         | .8999 9511<br>.9000 4353 | .4359<br>.4358   |
| .5643          | 18 8045               | 4918                     | 4827                     | 5 6981                   | 0 9195                   | .4357            |
| .5644          | 21 3442               | 3298                     | 3530                     | 5 0145                   | 1 4034<br>1 8873         | .4356            |
| .5645<br>.5646 | 23 8841<br>26 4240    | .3937 0050               | .4958 0928               | 4 3307<br>3 6467         | 2 3710                   | .4355<br>.4354   |
| .5647          | 28 9641               | .3936 8422               | .4957 9624               | 2 9626                   | 2 8546                   | .4353            |
| .5648          | 31 5042<br>34 0445    | 6792<br>5159             | 8318<br>7010             | 2 2782<br>1 5937         | 3 3380<br>3 8214         | .4352<br>.4351   |
| .5650          | .1636 5849            | .3936 3524               | .4957 5700               | .8250 9090               | .9004 3045               | .4350            |

 $E^{-1}$  =  $E^{1}$  = .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| P                | x                        | z                        | √pq                      | $\sqrt{1-p^2}$   | $\sqrt{1-q^2}$           | q              |
|------------------|--------------------------|--------------------------|--------------------------|------------------|--------------------------|----------------|
| .5650            | .1636 5849               | .3936 3524               | .4957 5700               | .8250 9090       | .9004 3045               | .4350          |
| .5651            | 39 1253                  | 1886                     | 4388                     | .8250 2242       | 4 7876                   | .4349          |
| .5652            | 41 6659                  | .3936 0246               | 3073                     | .8249 5391       | 5 2705                   | .4348          |
| .5653            | 44 2066                  | .3935 8603               | 1757                     | 8 8539           | 5 7532                   | .4347          |
| .5654            | 46 7474                  | 6957                     | .4957 0439               | 8 1685           | 6 2358                   | .4346          |
| .5655<br>.5656   | 49 2883                  | 5309                     | .4956 9118               | 7 4829           | 6 7183                   | .4345          |
|                  | 51 8293                  | 3659                     | 7796                     | 6 7972           | 7 2007                   | .4344          |
| .5657<br>.5658   | 54 3704<br>56 9116       | 2006                     | 6472                     | 6 1113           | 7 6829                   | .4343          |
| .5659            | 59 4530                  | .3935 0350<br>.3934 8692 | 5145<br>3816             | 5 4252<br>4 7389 | 8 1650<br>8 6469         | .4342          |
| .5660            | .1661 9944               | .3934 7031               | .4956 2486               | .8244 0524       | .9009 1287               | .4340          |
| .5661            | 64 5359                  |                          |                          |                  |                          |                |
| .5662            | 67 0776                  | 5368<br>3702             | .4956 1153<br>.4955 9818 | 3 3658<br>2 6789 | .9009 6104<br>.9010 0919 | .4339<br>.4338 |
| .5663            | 69 6193                  | 2034                     | 8482                     | 1 9919           | 0 5733                   | .4337          |
| .5664            | 72 1612                  | .3934 0363               | 7143                     | 1 3048           | 1 0545                   | .4336          |
| .5665            | 74 7032                  | .3933 8689               | 5802                     | .8240 6174       | 1 5357                   | .4335          |
| . 5666           | 77 2453                  | 7013                     | 4459                     | .8239 9299       | 2 0166                   | .4334          |
| .5667            | 79 7875                  | 5335                     | 3114                     | 9 2421           | 2 4975                   | .4333          |
| .5668            | 82 3298                  | 3654                     | 1767                     | 8 5542           | 2 9782                   | .4332          |
| .5669            | 84 8722                  | 1970                     | .4955 0418               | 7 8662           | 3 4588                   | .4331          |
| .5670            | .1687 4147               | .3933 0284               | .4954 9067               | .8237 1779       | .9013 9392               | .4330          |
| .5671            | 89 9573                  | .3932 8595               | 7713                     | 6 4895           | 4 4195                   | .4329          |
| .5672<br>.5673   | 92 5000<br>95 0429       | 6904<br>5210             | 6358<br>5001             | 5 8009<br>5 1121 | 4 8997<br>5 3797         | .4328<br>.4327 |
|                  |                          | Į.                       |                          |                  |                          | l              |
| .5674<br>.5675   | .1697 5858<br>.1700 1289 | 3514<br>1815             | 3641<br>2280             | 4 4231<br>3 7340 | 5 8596<br>6 3393         | .4326<br>.4325 |
| .5676            | 02 6721                  | .3932 0114               | .4954 0916               | 3 0446           | 6 8190                   | .4324          |
| . 5677           | 05 2154                  | .3931 8410               | .4953 9551               | 2 3551           | 7 2984                   | . 4323         |
| .5678            | 07 7587                  | 6703                     | 8183                     | 1 6654           | 7 7778                   | .4322          |
| . 5679           | 10 3022                  | 4994                     | 6814                     | 0 9756           | 8 2570                   | .4321          |
| . 5680           | .1712 8459               | .3931 3283               | .4953 5442               | .8230 2855       | .9018 7361               | .4320          |
| . 5681           | 15 3896                  | .3931 1569               | 4068                     | .8229 5953       | 9 2150                   | .4319          |
| . 5682           | 17 9334                  | .3930 9852               | 2692                     | 8 9049           | .9019 6938               | .4318          |
| . 5683           | 20 4774                  | 8133                     | .4953 1314               | 8 2143           | .9020 1724               | .4317          |
| .5684            | 23 0214                  | 6411                     | .4952 9934               | 7 5236           | 0 6510                   | .4316          |
| . 5685<br>. 5686 | 25 5656<br>28 1099       | 4687<br>2960             | 8552<br>7168             | 6 8326<br>6 1415 | 1 1294<br>1 6076         | .4315<br>.4314 |
|                  |                          | ļ                        | <b>(</b>                 |                  |                          | ł              |
| .5687            | 30 6543<br>33 1988       | .3930 1231<br>.3929 9499 | 5782<br>4394             | 5 4502<br>4 7587 | 2 0857<br>2 5637         | .4313<br>.4312 |
| . 5688<br>. 5689 | 35 7434                  | 7764                     | 3004                     | 4 0671           | 3 0416                   | .4311          |
| .5690            | .1738 2881               | .3929 6027               | .4952 1611               | .8223 3752       | .9023 5193               | .4310          |
| .5691            | 40 8330                  | 4288                     | .4952 0217               | 2 6832           | 3 9968                   | .4309          |
| .5692            | 43 3779                  | 2546                     | .4951 8821               | 1 9910           | 4 4743                   | .4308          |
| .5693            | 45 9230                  | .3929 0801               | 7422                     | 1 2986           | 4 9516                   | .4307          |
| .5694            | 48 4682                  | .3928 9054               | 6022                     | .8220 6061       | 5 4287                   | .4306          |
| .5695            | 51 0135                  | 7304                     | 4619                     | .8219 9133       | 5 9058                   | .4305          |
| .5696            | 53 5589                  | 5552                     | 3214                     | 9 2204           | 6 3827                   | .4304          |
| .5697            | 56 1044                  | 3797                     | 1808                     | 8 5273           | 6 8594                   | .4303          |
| .5698            | 58 6500                  | 2039                     | .4951 0399<br>.4950 8988 | 7 8340<br>7 1406 | 7 3360<br>7 8125         | .4302          |
| .5699            | 61 1958                  | .3928 0280               |                          |                  |                          |                |
| .5700            | .1763 7416               | .3927 8517               | .4950 7575               | .8216 4469       | .9028 2889               | .4300          |

 $E^{-1}_{-1}$   $E^{1}_{-0000,0000+}$   $E^{1}_{-0000,0000+}$   $E^{1}_{-0000,0000+}$   $E^{1}_{-0000,0000+}$   $E^{1}_{-0000,0000+}$   $E^{1}_{-0000,0000+}$   $E^{1}_{-0000,0000+}$ 

| .5700                   |                                |                          | TABLE I                  |                      |                          | .4300            |
|-------------------------|--------------------------------|--------------------------|--------------------------|----------------------|--------------------------|------------------|
| P                       | x                              | z                        | √pq                      | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$           | q                |
| .5700                   | .1763 7416                     | .3927 8517               | .4950 7575               | .8216 4469           | .9028 2889               | .4300            |
| .5701                   | 66 2876                        | 6752                     | 0 6160                   | 5 7531               | 8 7651<br>9 2412         | .4299<br>.4298   |
| . 5702                  | 68 8337<br>71 3799             | 4984<br>3214             | 0 4743<br>0 3324         | 5 0591<br>4 3649     | .9029 7171               | .4297            |
| .5703                   | 71 37 <del>99</del><br>73 9262 | .3927 1442               | 0 1903                   | 3 6706               | .9030 1929               | .4296            |
| .5704<br>.5705<br>.5706 | 75 9202<br>76 4727<br>79 0192  | .3926 9667<br>7889       | .4950 0480<br>.4949 9055 | 2 9760<br>2 2813     | 0 6686<br>1 1441         | .4295<br>.4294   |
| .5707                   | 81 5659                        | 6108                     | 9 7627                   | 1 5864               | 1 6195<br>2 0948         | .4293<br>.4292   |
| .5708  <br>.5709        | 84 1127<br>86 6596             | 4326<br>2540             | 9 6198<br>9 4766         | 0 8913<br>.8210 1960 | 2 5699                   | .4291            |
| .5710                   | .1789 2066                     | .3926 0752               | .4949 3333               | .8209 5006           | .9033 0449               | .4290            |
| .5711                   | 91 7537                        | .3925 8962               | 9 1897                   | 8 8050               | 3 5197                   | .4289            |
| .5712  <br>.5713        | 94 3010<br>96 8483             | 7169<br>5373             | 9 0460<br>8 9020         | 8 1092<br>7 4132     | 3 9945<br>4 4690         | . 4288<br>. 4287 |
| .5714                   | .1799 3958                     | 3575                     | 8 7578                   | 6 7170               | 4 9435                   | . 4286           |
| .5715  <br>.5716        | .1801 9434<br>04 4911          | .3925 1774<br>.3924 9971 | 8 6134<br>8 4689         | 6 0207<br>5 3241     | 5 4178  <br>5 8920       | .4285<br>.4284   |
| .5717                   | 07 0390                        | 8165                     | 8 3241                   | 4 6274               | 6 3660                   | . 4283           |
| .5718<br>.5719          | 09 5869<br>12 1350             | 6357<br>4546             | 8 1791<br>8 0339         | 3 9305<br>3 2334     | 6 8399<br>7 3137         | . 4882<br>. 4281 |
| .5720                   | .1814 6832                     | .3924 2733               | .4947 8884               | .8202 5362           | .9037 7873               | .4280            |
| .5721                   | 17 2315                        | .3924 0917               | 7 7428                   | 1 8388               | 8 2608                   | .4279            |
| .5722<br>.5723          | 19 7799<br>22 3284             | .3923 9098<br>7277       | 7 5970<br>7 4510         | 1 1411<br>.8200 4433 | 8 7342<br>9 2074         | . 4278<br>. 4277 |
| .5724                   | 24 8771                        | 5454                     | 7 3047                   | .8199 7454           | .9039 6805               | .4276            |
| .5725<br>.5726          | 27 4259<br>29 9747             | 3628<br>.3923 1799       | 7 1583<br>7 0116         | 9 0472<br>8 3489     | .9040 1535<br>0 6263     | .4275<br>.4274   |
| .5727                   | 32 5238                        | .3922 9968               | 6 8648                   | 7 6503               | 1 0990                   | .4273            |
| .5728<br>.5729          | 35 0729<br>37 6221             | 8134<br>6298             | 6 7177<br>6 5704         | 6 9516<br>6 2527     | 1 5715<br>2 0440         | .4272<br>.4271   |
| .5730                   | .1840 1715                     | .3922 4459               | .4946 4229               | .8195 5537           | .9042 5162               | .4270            |
| .5731                   | 42 7210                        | 2617                     | 6 2753                   | 4 8544               | 2 9884                   | .4269            |
| .5732<br>.5733          | 45 2706<br>47 8203             | .3922 0773<br>.3921 8927 | 6 1274<br>5 9793         | 4 1550<br>3 4554     | 3 4604  <br>3 9323       | . 4268<br>. 4267 |
| .5734                   | 50 3702                        | 7078                     | 5 8310                   | 2 7556               | 4 4040                   | .4266            |
| .5735                   | 52 9202                        | 5226                     | 5 6825<br>5 5337         | 2 0556<br>1 3554     | 4 8756<br>5 3471         | .4265<br>.4264   |
| .5736<br>.5737          | 55 4702<br>58 0205             | 3372<br>.3921 1515       | 5 3848                   | .8190 6551           | 5 8184                   | .4263            |
| .5738                   | 60 5708                        | .3920 9656               | 5 2357                   | .8189 9546           | 6 2896                   | .4262            |
| .5739                   | 63 1212                        | 7794                     | 5 0863                   | 9 2539               | 6 7607                   | .4261            |
| .5740                   | .1865 6718                     | .3920 5929               | .4944 9368               | .8188 5530           | .9047 2316               | .4260            |
| .5741<br>.5742          | 68 2225<br>70 7733             | 4062<br>2193             | 4 7871<br>4 6371         | 7 8519<br>7 1507     | 7 7024<br>8 1731         | .4259<br>.4258   |
| .5743                   | 73 3243                        | .3920 0321               | 4 4869                   | 6 4492               | 8 6436                   | .4257            |
| .5744                   | 75 8753<br>78 4265             | .3919 8446               | 4 3366<br>4 1860         | 5 7476<br>5 0458     | 9 1140                   | .4256            |
| .5745<br>.5746          | 78 4265<br>80 9778             | 6569<br>4689             | 4 0352                   | 5 0458<br>4 3438     | .9049 5842<br>.9050 0544 | .4255<br>.4254   |
| .5747                   | 83 5292                        | 2807                     | 3 8842                   | 3 6417               | 0 5243                   | .4253            |
| .5748<br>.5749          | 86 0808<br>88 6325             | .3919 0922<br>.3918 9035 | 3 7330<br>3 5816         | 2 9393<br>2 2368     | 0 9942<br>1 4639         | .4252<br>.4251   |
| .5750                   | .1891 1843                     | .3918 7145               | .4943 4300               | .8181 5341           | .9051 9335               | .4250            |
| 11                      | *!L                            | 1 .2/10 /172             | 1 1717 1700              | ודעל וטוט.           | 1 . /0/1 7///            | -7400            |

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| 5/50                    |                                  |                                  |                                    |                                    |                                    | 4250                    |
|-------------------------|----------------------------------|----------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------|
| P                       | x                                | Z                                | √pq                                | $\sqrt{1-p^2}$                     | $\sqrt{1-q^2}$                     | q                       |
| .5750                   | .1891 1843                       | .3918 7145                       | .4943 4300                         | .8181 5341                         | .9051 9335                         | .4250                   |
| .5751<br>.5752<br>.5753 | 93 7362<br>96 2882<br>.1898 8404 | 5253<br>3358<br>.3918 1460       | 3 2782<br>3 1261<br>2 9739         | 0 8312<br>.8180 1281<br>.8179 4249 | 2 4029<br>2 8723<br>3 3414         | .4249<br>.4248<br>.4247 |
| .5754<br>.5755<br>.5756 | .1901 3927<br>03 9451<br>06 4976 | .3917 9560<br>7657<br>5752       | 2 8215<br>2 6688<br>2 5160         | 8 7214<br>8 0178<br>7 3140         | 3 8105<br>4 2794<br>4 7481         | .4246<br>.4245<br>.4244 |
| .5757<br>.5758<br>.5759 | 09 0503<br>11 6031<br>14 1560    | 3844<br>1934<br>.3917 0021       | 2 3629<br>2 2096<br>2 0562         | 6 6100<br>5 9058<br>5 2015         | 5 2168<br>5 6853<br>6 1537         | .4243<br>.4242<br>.4241 |
| .5760                   | .1916 7090                       | .3916 8106                       | .4941 9025                         | .8174 4969                         | .9056 6219                         | .4240                   |
| .5761<br>.5762<br>.5763 | 19 2622<br>21 8155<br>24 3689    | 6188<br>4267<br>2344             | 1 7486<br>1 5945<br>1 4402         | 3 7922<br>3 0873<br>2 3822         | 7 0900<br>7 5579<br>8 0258         | .4239<br>.4238<br>.4237 |
| .5764<br>.5765<br>.5766 | 26 9224<br>29 4761<br>32 0299    | .3916 0418<br>.3915 8490<br>6559 | 1 2857<br>1 1309<br>0 9760         | 1 6769<br>0 9715<br>.8170 2658     | 8 4935<br>8 9610<br>9 4285         | .4236<br>.4235<br>.4234 |
| .5767<br>.5768<br>.5769 |                                  | 4626<br>2690<br>.3915 0752       | 0 8209<br>0 6655<br>0 5100         | .8169 5600<br>8 8540<br>8 1478     | .9059 8957<br>.9060 3629<br>0 8299 | .4233<br>.4232<br>.4231 |
| .5770                   | .1942 2463                       | .3914 8811                       | .4940 3542                         | .8167 4415                         | .9061 2968                         | .4230                   |
| .5771<br>.5772<br>.5773 | 47 3553                          | 6867<br>4921<br>2973             | 0 1983<br>.4940 0421<br>.4939 8857 | 6 7349<br>6 0282<br>5 3212         | 1 7636<br>2 2302<br>2 6967         | .4229<br>.4228<br>.4227 |
| .5774<br>.5775<br>.5776 | 55 0197                          | .3914 1022<br>.3913 9068<br>7111 | 9 7291<br>9 5723<br>9 4154         | 4 6141<br>3 9068<br>3 1994         | 3 1630<br>3 6292<br>4 0953         | .4226<br>.4225<br>.4224 |
| .5777<br>.5778<br>.5779 | 62 6852                          | 5153<br>3191<br>.3913 1227       | 9 2581<br>9 1007<br>8 9431         | 2 4917<br>1 7839<br>1 0758         |                                    | .4223<br>.4222<br>.4221 |
| .5780                   | .1967 7962                       | .3912 9261                       | .4938 7853                         | .8160 3676                         | .9065 9583                         | .4220                   |
| .5781<br>.5782<br>.5783 | 2 72 9077                        | 7292<br>5320<br>3346             | 8 6272<br>8 4690<br>8 3105         | .8159 6592<br>8 9507<br>8 2419     | 6 8890<br>7 3541                   | .4218                   |
| .5784<br>.5785          | 80 5760                          | .3912 1369<br>.3911 9390<br>7408 | 8 1519<br>7 9930<br>7 8339         | 6 8238<br>6 1145                   | 8 2840<br>8 7488                   | .4214                   |
| .5787<br>.5789          | 8 88 2454                        | 5424<br>3437<br>.3911 1447       | 7 6747<br>7 5152<br>7 3555         | 4 6953<br>3 9855                   | .9069 6778<br>.9070 1422           | .4212                   |
| .579                    | 0 .1993 3590                     | .3910 9455                       | .4937 1956                         |                                    |                                    |                         |
| .579<br>.579<br>.579    | 2 . 1998 4731                    | 7460<br>5463<br>3463             | 7 0354<br>6 8751<br>6 7146         | 1 8548                             | 1 5344<br>1 9982                   | .420                    |
| .579<br>.579<br>.579    | 03 5877<br>06 1452               |                                  | 6 5539<br>6 3929<br>6 2318         | .8149 7224<br>9 0112               | 2 9254<br>2 3 3888                 | .420                    |
| .579<br>.579<br>.579    | 07 11 2607<br>08 13 8186         | 3426                             | 6 0704<br>5 9088<br>5 7471         | 7 5884<br>6 8766                   | 4 3152<br>5 4 7782                 | .420                    |
| .580                    |                                  | .3908 9394                       | .4935 5851                         | .8146 164                          | 7 .9075 2410                       | .420                    |

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| P     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .5800 | .2018 9348 | .3908 9394 | .4935 5851 | .8146 1647     | .9075 2410     | .4200 |
| .5801 | 21 4931    | 7373       | 5 4229     | 5 4527         | 5 7038         | .4199 |
| .5802 | 24 0515    | 5351       | 5 2605     | 4 7404         | 6 1664         | .4198 |
| .5803 | 26 6101    | 3325       | 5 0979     | 4 0279         | 6 6288         | .4197 |
| .5804 | 29 1688    | .3908 1297 | 4 9351     | 3 3153         | 7 0912         | .4196 |
| .5805 | 31 7276    | .3907 9267 | 4 7720     | 2 6025         | 7 5534         | .4195 |
| .5806 | 34 2866    | 7234       | 4 6088     | 1 8895         | 8 0154         | .4194 |
| .5807 | 36 8457    | 5198       | 4 4454     | 1 1763         | 8 4774         | .4193 |
| .5808 | 39 4049    | 3160       | 4 2817     | .8140 4629     | 8 9391         | .4192 |
| .5809 | 41 9643    | .3907 1119 | 4 1179     | .8139 7493     | 9 4008         | .4191 |
| .5810 | .2044 5238 | .3906 9076 | .4933 9538 | .8139 0356     | .9079 8623     | .4190 |
| .5811 | 47 0835    | 7030       | 3 7895     | 8 3216         | .9080 3237     | .4189 |
| .5812 | 49 6432    | 4982       | 3 6250     | 7 6075         | 0 7850         | .4188 |
| .5813 | 52 2031    | 2931       | 3 4603     | 6 8932         | 1 2461         | .4187 |
| .5814 | 54 7632    | .3906 0878 | 3 2955     | 6 1787         | 1 7071         | .4186 |
| .5815 | 57 3233    | .3905 8822 | 3 1303     | 5 4640         | 2 1680         | .4185 |
| .5816 | 59 8836    | 6763       | 2 9650     | 4 7492         | 2 6287         | .4184 |
| .5817 | 62 4441    | 4702       | 2 7995     | 4 0341         | 3 0893         | .4183 |
| .5818 | 65 0047    | 2638       | 2 6338     | 3 3189         | 3 5497         | .4182 |
| .5819 | 67 5654    | .3905 0572 | 2 4678     | 2 6035         | 4 0101         | .4181 |
| .5820 | .2070 1262 | .3904 8503 | .4932 3017 | .8131 8878     | .9084 4703     | .4180 |
| .5821 | 72 6872    | 6432       | 2 1353     | 1 1721         | 4 9303         | .4179 |
| .5822 | 75 2483    | 4358       | 1 9688     | .8130 4561     | 5 3903         | .4178 |
| .5823 | 77 8096    | 2281       | 1 8020     | .8129 7399     | 5 8500         | .4177 |
| .5824 | 80 3710    | .3904 0202 | 1 6350     | 9 0236         | 6 3097         | .4176 |
| .5825 | 82 9325    | .3903 8120 | 1 4678     | 8 3070         | 6 7692         | .4175 |
| .5826 | 85 4942    | 6036       | 1 3004     | 7 5903         | 7 2286         | .4174 |
| .5827 | 88 0560    | 3949       | 1 1328     | 6 8734         | 7 6879         | .4173 |
| .5828 | 90 6179    | .3903 1860 | 0 9650     | 6 1563         | 8 1470         | .4172 |
| .5829 | 93 1800    | .3902 9768 | 0 7970     | 5 4390         | 8 6060         | .4171 |
| .5830 | .2095 7422 | .3902 7674 | .4930 6288 | .8124 7215     | .9089 0649     | .4170 |
| .5831 | .2098 3046 | 5577       | 0 4603     | 4 0039         | 9 5236         | .4169 |
| .5832 | .2100 8671 | 3477       | 0 2917     | 3 2860         | .9089 9822     | .4168 |
| .5833 | 03 4297    | .3902 1375 | .4930 1228 | 2 5680         | .9090 4406     | .4167 |
| .5834 | 05 9925    | 3901 9270  | .4929 9538 | 1 8498         | 0 8990         | .4166 |
| .5835 | 08 5554    | 7163       | 9 7845     | 1 1314         | 1 3572         | .4165 |
| .5836 | 11 1184    | 5053       | 9 6150     | .8120 4128     | 1 8152         | .4164 |
| .5837 | 13 6816    | 2941       | 9 4453     | .8119 6940     | 2 2731         | .4163 |
| .5838 | 16 2449    | .3901 0826 | 9 2754     | 8 9751         | 2 7309         | .4162 |
| .5839 | 18 8084    | .3900 8708 | 9 1053     | 8 2559         | 3 1886         | .4161 |
| .5840 | .2121 3720 | .3900 6588 | .4928 9350 | .8117 5366     | .9093 6461     | .4160 |
| .5841 | 23 9357    | 4465       | 8 7644     | 6 8170         | 4 1035         | .4159 |
| .5842 | 26 4996    | 2340       | 8 5937     | 6 0973         | 4 5608         | .4158 |
| .5843 | 29 0636    | .3900 0212 | 8 4228     | 5 3774         | 5 0179         | .4157 |
| .5844 | 31 6278    | .3899 8082 | 8 2516     | 4 6574         | 5 4749         | .4156 |
| .5845 | 34 1921    | 5949       | 8 0803     | 3 9371         | 5 9318         | .4155 |
| .5846 | 36 7565    | 3814       | 7 9087     | 3 2166         | 6 3885         | .4154 |
| .5847 | 39 3211    | .3899 1676 | 7 7369     | 2 4960         | 6 8451         | .4153 |
| .5848 | 41 8858    | .3898 9535 | 7 5649     | 1 7751         | 7 3016         | .4152 |
| .5849 | 44 4507    | 7392       | 7 3927     | 1 0541         | 7 7579         | .4151 |
| .5850 | .2147 0157 | .3898 5246 | .4927 2203 | .8110 3329     | .9098 2141     | .4150 |

 $E^{-1}$   $E^{1}$   $E^{$ 

| P              | x                  | z                  | √pq              | $\sqrt{1-p^2}$               | $\sqrt{1-q^2}$   | q              |
|----------------|--------------------|--------------------|------------------|------------------------------|------------------|----------------|
| .5850          | .2147 0157         | .3898 5246         | .4927 2203       | .8110 3329                   | .9098 2141       | .4150          |
| .5851          | 49 5808            | 3098               | 7 0477           | .8109 6115                   | 8 6702           | .4149          |
| .5852          | 52 1461            | .3898 0947         | 6 8749           | 8 8899                       | 9 1261           | .4148          |
| .5853          | 54 7115            | .3897 8794         | 6 7018           | 8 1682                       | .9099 5819       | .4147          |
| .5854          | 57 2771            | 6638               | 6 5286           | 7 4462                       | .9100 0376       | .4146          |
| .5855          | 59 8428            | 4479               | 6 3551           | 6 7241                       | 0 4931           | .4145          |
| .5856          | 62 4087            | 2318               | 6 1815           | 6 0017                       | 0 9485           | .4144          |
| .5857          | 64 9747            | .3897 0154         | 6 0076           | 5 2792                       | 1 4038           | .4143          |
| .5858<br>.5859 | 67 5408<br>70 1071 | .3896 7988<br>5819 | 5 8335<br>5 6592 | 4 5565                       | 1 8589           | .4142          |
|                |                    |                    |                  | 3 8336                       | 2 3139           | .4141          |
| . 5860         | .2172 6735         | .3896 3648         | .4925 4847       | .8103 1105                   | .9102 7688       | .4140          |
| .5861          | 75 2401            | .3896 1474         | 5 3100           | 2 3872                       | 3 2235           | .4139          |
| .5862<br>.5863 | 77 8068<br>80 3736 | .3895 9297<br>7118 | 5 1351<br>4 9600 | 1 6638<br>0 9401             | 3 6782           | .4138          |
| 1 1            |                    |                    |                  |                              | 4 1326           | .4137          |
| .5864<br>.5865 | 82 9406<br>85 5078 | 4937<br>2752       | 4 7847<br>4 6091 | .8100 2163                   | 4 5870           | .4136          |
| .5866          | 88 0751            | .3895 0565         | 4 4334           | .8099 4923<br>8 <b>7</b> 681 | 5 0412<br>5 4953 | .4135<br>.4134 |
| .5867          | 90 6425            | .3894 8376         |                  |                              |                  |                |
| .5868          | 93 2101            | 6184               | 4 2574<br>4 0812 | 8 0437<br>7 3191             | 5 9492<br>6 4030 | .4133<br>.4132 |
| .5869          | 95 7778            | 3990               | 3 9049           | 6 5943                       | 6 8567           | .4131          |
| .5870          | .2198 3456         | .3894 1793         | .4923 7283       | .8095 8693                   | .9107 3103       | .4130          |
| .5871          | .2200 9136         | .3893 9593         | 3 5515           | 5 1442                       | 7 7637           | .4129          |
| .5872          | 03 4818            | 7391               | 3 3745           | 4 4188                       | 8 2169           | .4128          |
| .5873          | 06 0501            | 5186               | 3 1972           | 3 6933                       | 8 6701           | .4127          |
| .5874          | 08 6185            | 2979               | 3 0198           | 2 9676                       | 9 1231           | .4126          |
| .5875          | 11 1871            | .3893 0769         | 2 8422           | 2 2417                       | .9109 5760       | .4125          |
| .5876          | 13 7559            | .3892 8556         | 2 6643           | 1 5156                       | .9110 0288       | .4124          |
| .5877          | 16 3248            | 6341               | 2 4863           | 0 7893                       | 0 4814           | .4123          |
| .5878<br>.5879 | 18 8938<br>21 4629 | 4124<br>.3892 1904 | 2 3080<br>2 1295 | .8090 0628<br>.8089 3361     | 0 9339<br>1 3862 | .4122<br>.4121 |
| .5880          | .2224 0323         | .3891 9681         | .4921 9508       | .8088 6093                   | .9111 8385       | .4120          |
| .5881          |                    |                    | 1 7719           |                              |                  |                |
| .5882          | 26 6017<br>29 1714 | 7455<br>5228       | 1 5928           | 7 8822<br>7 1550             | 2 2905<br>2 7425 | .4119          |
| .5883          | 31 7411            | 2997               | 1 4135           | 6 4276                       | 3 1943           | .4117          |
| .5884          | 34 3110            | .3891 0764         | 1 2340           | 5 7000                       | 3 6460           | .4116          |
| .5885          | 36 8811            | .3890 8528         | 1 0543           | 4 9722                       | 4 0976           | .4115          |
| .5886          | 39 4513            | 6290               | 0 8743           | 4 2442                       | 4 5490           | .4114          |
| .5887          | 42 0216            | 4050               | 0 6942           | 3 5160                       | 5 0003           | .4113          |
| .5888          | 44 5921            | .3890 1806         | 0 5138           | 2 7876                       | 5 4515           | .4112          |
| .5889          | 47 1628            | .3889 9560         | 0 3332           | 2 0591                       | 5 9025           | .4111          |
| .5890          | .2249 7336         | .3889 7312         | .4920 1524       | .8081 3303                   | .9116 3534       | .4110          |
| .5891          | 52 3045<br>54 9756 | 5061               | .4919 9714       | .8080 6014                   | 6 8042           | .4109          |
| .5892          | 54 8756<br>57 4469 | 2807<br>.3889 0551 | 9 7902<br>9 6088 | .8079 8723<br>9 1430         | 7 2548<br>7 7054 | .4108          |
| 1              |                    | 1                  |                  | 1                            | 8 1557           | i              |
| .5894<br>.5895 | 60 0183<br>62 5898 | .3888 8292<br>6031 | 9 4272<br>9 2454 | 8 4135<br>7 6838             | 8 6060           | .4106          |
| .5896          | 65 1615            | 3767               | 9 0633           | 6 9539                       | 9 0561           | .4104          |
| .5897          | 67 7333            | .3888 1501         | 8 8811           | 6 2238                       | 9 5061           | .4103          |
| .5898          | 70 3053            | .3887 9232         | 8 6986           | 5 4935                       | .9119 9559       | .4102          |
| .5899          | 72 8775            | 6960               | 8 5159           | 4 7631                       | .9120 4056       | .4101          |
| .5900          | .2275 4498         | .3887 4686         | .4918 3331       | .8074 0324                   | .9120 8552       | .4100          |

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| p         x         √pq         √1−p²         √1−q²         q           .5900         .2275 4498         .3887 4686         .4918 3331         .8074 0324         .9120 8552         .4100           .5901         78 0222         .2409         8 1500         3 3016         1 3047         .4098           .5902         80 5948         .3887 0130         7 9667         2 5706         1 7540         .4098           .5903         83 1675         .3886 7848         7 7831         1 8394         2 2032         .4096           .5906         88 3135         .3277         7 4155         .8070 3764         3 1012         .4095           .5906         90 8867         .3886 0987         7 2313         .8069 6446         3 5500         .4093           .5907         93 4600         .3885 8695         7 0475         8 9126         3 9986         .4033           .5908         96 0335         6400         6 8624         8 1805         4 4422         .4092           .5910         1810         .3885 1803         .4916 4927         .8066 7156         .9125 348         .4910           .5911         03 7550         .3884 9500         6 3075         5 928         5 7920         .4089 </th <th>.5900</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>.4100</th>                               | .5900  |            |            |            |                |                  | .4100  |
|--|--------|------------|------------|------------|----------------|------------------|--------|
| .5901  | p      | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$   | q      |
| 5902         80 5948         3887 0130         7 9667         2 5706         1 7540         4098           5904         85 7404         5564         7 5994         1 1080         2 6522         4096           5905         88 3135         3277         7 4155         8070 3764         3 1012         4095           5907         93 4600         .3885         8695         7 0470         8 9126         3 9986         4093           5909         2298         6072         4103         66776         7 4481         48966         4093           5909         2298         6072         4103         66776         7 4481         48966         4093           5909         2298         6072         4103         6776         7 4481         48966         4091           5911         03 7550         .3884         9500         6 3075         5 9828         5 7200         4089           5912         06 3291         7195         6 1220         5 2499         6 2400         4088           5912         06 3291         7195         6 1220         5 2499         6 2400         4088           5912         40 523         3884 0265         5 5646         3  | .5900  | .2275 4498 | .3887 4686 | .4918 3331 | .8074 0324     | .9120 8552       | .4100  |
| .5903         83 1675         .3886 7848         7 7831         1 8394         2 2032         .4097           .5904         85 7404         5564         7 5994         1 1080         2 6522         .4095           .5905         88 3135         3277         7 4155         .8070         3764         3 1012         .4095           .5907         93 4600         .3885         8695         7 0470         8 9126         3 9986         .4093           .5908         96 0335         6400         6 8624         8 1805         4 472         .4092           .5901         .2298         6072         4103         6 6776         7 4481         4 8956         .4091           .5911         .03 7550         .3884         5906         6 3075         5 9628         5 7200         .4089           .5913         .08 9033         4888         5 9364         4 5168         6 6878         .4087           .5914         11 4778         2578         5 7506         3 7835         7 7 1356         .4087           .5915         14 0523         .3884 9026         5 5646         3 0500         7 5832         .4087           .5916         16 6271         .3883 7949         5 738   | .5901  | 78 0222    |            |            | 3 3016         | 1 3047           | .4099  |
| .5904         85 7404         5564         7 5994         1 1080         2 6522         .4096           .5905         88 3135         3277         7 4155         .8070         3764         3 1012         .4095           .5907         93 4600         .3885         8695         7 0470         8 9126         3 9986         .4093           .5908         96 0335         6400         6 6776         7 4481         4 4472         .4092           .5909         .2298         6072         4103         6 6776         7 4481         4 8956         .4092           .5910         .2301         1810         .3885         1803         .4916         4927         .8066         7156         .9125         3438         .4090           .5911         03 7550         .3884         9500         6 3075         5 9828         5 7920         .4089           .5914         11 4778         .2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         .3884         0265         5 5646         3 0500         7 6332         .4086           .5917         19 2019         5632         5 1919         1 5824         8 4780         .4083 <td></td> <td></td> <td></td> <td></td> <td>2 5706</td> <td></td> <td></td>   |        |            |            |            | 2 5706         |                  |        |
| 5905         88 3135         3277         7 4155         8070 3764         3 1012         4095           5907         93 8667         3886 0987         7 2313         8069 6446         3 5500         4093           5908         96 0335         6400         6 8624         8 1805         4 4472         4092           5908         928 6072         4103         6 6776         7 481         4 8956         4093           5910         2301 1810         3885 1803         .4916 4927         .8066 7156         .9125 3438         .4090           .5911         03 7550         .3884 9500         6 3075         5 9828         5 7920         .4089           .5913         08 9033         4888         5 9364         4 5168         6 678         4086           .5914         11 4778         2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         .3884 0265         5 5646         3 0500         7 5832         .4085           .5917         19 2019         5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         3381         5 0052         8483         89252         .4082  | .5903  | 83 1675    | .3886 7848 | 7 7831     | 1 8394         | 2 2032           | .4097  |
| .5906         90         8867         .3886         0987         7         2313         .8069         6446         3         5500         .4094           .5908         96         0335         6400         68624         8         1805         3986         .4093           .5909         .2298         6072         4103         66776         7         4481         4896         .4091           .5910         .2301         1810         .3885         1803         .4916         4927         .8066         7156         .9125         3438         .4090           .5911         03         3550         .3884         9500         6         3075         5         9828         5 7920         .4089           .5913         08         9033         4888         5 9364         4 5168         6 6878         .4087           .5914         11         4778         .2578         5 7566         3 7835         7 1356         .4086           .5916         16         6271         .3883         7949         5 3783         2 3163         8 0307         .4081           .5917         19 2019         .5632         5 1919         1 524         8 4780   |        |            |            |            |                |                  |        |
| .5907         93 4600         .3885 8695         7 0470         8 9126         3 9986         .4093           .5908         298 6072         4103         6 6776         7 4881         4 4472         .4092           .5910         .2301 1810         .3885 1803         .4916 4927         .8066 7156         .9125 3438         .4090           .5911         03 7550         .3884 9500         6 3075         5 9828         5 7920         .4089           .5912         06 3291         7195         6 1220         5 2499         6 2400         .4088           .5913         08 9033         4888         5 9364         4 5168         6 6878         .4086           .5914         11 4778         2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         .3884 0265         5 5464         3 0500         7 5832         .4085           .5917         19 2019         5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         3311         5 0052         0 8483         8 9252         .4082           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 81   |        |            |            |            |                |                  |        |
| 5908         96 0335         6400         6 8624         8 1805         4 4472         4092           5909         .2298 6072         4103         6 6776         7 4881         4 8956         .4091           5910         .2301         1810         .3885         1803         .4916         4927         .8066         7156         .125         3438         .4090           5912         06         3291         7195         6 1220         5 2499         6 2400         .4088           5913         11         4778         2578         5 7506         3 7835         7 1356         .4086           5915         14 0523         .3884         0265         5 5466         3 0500         7 5832         .4085           5916         16 6271         .3883         7949         5 3783         2 3163         8 0307         .4084           5917         19         2019         5632         5 1919         1 5824         8 4780         .4083           5918         21 7770         .3311         5 0052         0 8483         8 9252         .4082           5920         .2326         9275         .3882         8662         .4914         6312         .8093  | .5906  | 90 8867    |            | 1 2313     | '              |                  |        |
| .5909         .2298 6072         4103         6 6776         7 4481         4 8956         .4091           .5910         .2301 1810         .3885 1803         .4916 4927         .8066 7156         .9125 3438         .4090           .5911         .03 7550         .3884 9500         6 3075         .59828         .57920         .4089           .5913         .08 9033         .4888         .5 9364         .4 5168         .6 6878         .4087           .5914         .11 4778         .2578         .5 7506         .3 7835         .7 1356         .4086           .5915         .14 0523         .3884 0265         .5 5646         .3 0500         .7 8332         .4085           .5916         .16 6271         .3883 7949         .5 3783         .2 3163         .8 0307         .4084           .5917         .19 2019         .5632         .5 1919         .1 5824         .8 4780         .4083           .5918         .21 770         .3311         .5 0052         .0 8483         .8 9252         .4083           .5910         .2 3522         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         .29 5030         .6334         .4 4439 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>                                |        |            |            |            |                |                  |        |
| .5910         .2301         1810         .3885         1803         .4916         4927         .8066         7156         .9125         3438         .4090           .5911         03         7550         .3884         9500         6         3075         5         9828         5         7920         .4089           .5912         06         3291         7195         6         1220         5         2499         6         2400         .4088           .5913         11         4778         2578         5         7506         3         7835         7         1356         .4086           .5916         16         6271         .3883         7949         5         3783         2         3163         8         3077         .4084           .5917         19         2019         5632         5         1919         1         5843         8         2525         .4082           .5917         19         2019         3381         5         0552         0         8483         8         2525         .4082           .5918         21         7770         3311         5         0052         0         8483         8  |        |            |            |            |                |                  |        |
| .5911         03 7550         .3884 9500         6 3075         5 9828         5 7920         .4089           .5912         06 3291         7195         6 1220         5 2499         6 2400         .4089           .5913         08 9033         4888         5 9364         4 5168         6 6878         .4087           .5914         11 4778         2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         .3884 0265         5 5646         3 0500         7 5832         .4085           .5916         16 6271         .3883 7949         5 3783         2 3163         8 0307         .4085           .5917         19 2019         5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         .3381         5 0052         0 8483         8 9252         .4082           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         .29 5030         .6334         4 4439         8 6450         .9130 214         .4078           .5921         .29 5030         .6334         4 4439         8 6450         .9132 4073   |        |            |            |            |                |                  |        |
| .5912         06 3291         7195         6 1220         5 2499         6 2400         .4088           .5913         08 9033         4888         5 9364         4 5168         6 6878         .4086           .5914         11 4778         2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         .3884 0265         5 5646         3 0500         7 5832         .4085           .5916         16 6271         .3883 7949         5 3783         2 3163         8 0307         .4084           .5917         19 2019         5632         5 1919         1 5824         8 4 780         .4085           .5918         21 7770         3311         5 0052         0 8483         8 9252         .4082           .5919         24 3522         .3883 0988         4 8183         .8060 1141         9 3723         .4081           .5921         29 5030         6334         4 4439         8 6450         .9129 8193         .4080           .5921         29 5030         6334         4 4439         8 6450         .9130 2661         .4079           .5921         37 2304         .3881 6934         3 8807         6 4399         1 6058         .407  | .5910  | .2301 1810 | .3885 1803 | .4916 4927 | .8066 7156     | .9125 3438       | .4090  |
| .5913         08 9033         4888         5 9364         4 5168         6 6878         .4087           .5914         11 4778         2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         .3884 0265         5 5646         3 0500         7 5832         .4085           .5916         16 6271         .3883 7949         5 3783         2 3163         8 0307         .4084           .5917         19 2019         .5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         .3311         5 0052         0 8483         8 9252         .4082           .5919         24 3522         .3883 0988         4 8183         .8060 1141         9 3723         .4081           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         .32 50786         .4003         4 2564         7 9102         0 7128         .4078           .5922         .37 2074         .3881 9334         3 8807         6 4399         1 6058         .4075           .5924         .37 2304         .3881 9314         3 807         6 4399         1 60   |        |            |            |            |                |                  |        |
| .5914         11 4778         2578         5 7506         3 7835         7 1356         .4086           .5915         14 0523         3884 0265         5 5646         3 0500         7 5832         .4085           .5916         16 6271         .3883 7949         5 3783         2 3163         8 0307         .4084           .5917         19 2019         5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         3311         5 0052         0 8483         8 9252         .4082           .5920         2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         29 5030         6334         4 4439         8 6450         .9129 8193         .4080           .5921         29 5030         6334         4 4439         8 6450         .9120 8193         .4078           .5921         29 5030         6334         4 4399         8 6450         .9129 8193         .4080           .5921         29 5030         .3882 1670         4 0687         7 1751         1 1593         .4071           .5924         37 2304         .3881 9314         3 807         6 4399         1 6058  |        |            |            |            |                |                  |        |
| .5915         14         ó523         .3884         0265         5 5646         3         0500         7 5832         .4085           .5916         16         6271         .3883         7949         5 3783         2         3163         8         0307         .4084           .5917         19         2019         5632         5 1919         1         5824         8 4780         .4082           .5918         21         7770         3311         5 0052         0         8483         8 9252         .4082           .5919         24         3522         .3883         0988         4         8183         .8060         1141         9         3723         .4081           .5920         .2326         9275         .3882         8662         .4914         6312         .8059         3796         .9129         8193         .4081           .5921         29         5030         6334         4 4439         8 6450         .9130         2661         .4079           .5922         32         20786         4003         4 2564         7 9102         0 7128         .4078           .5924         37         2304         .3881         3311 <td></td> <td></td> <td></td> <td>į</td> <td></td> <td></td> <td></td>  |        |            |            | į          |                |                  |        |
| .5916         16 6271         .3883 7949         5 3783         2 3163         8 0307         .4084           .5917         19 2019         5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         3311         5 0052         0 8483         8 9252         .4082           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         .29 5030         6334         4 4439         8 6450         .9129 8193         .4080           .5922         32 0786         4003         4 2564         7 9102         0 7128         .4078           .5923         34 6544         .3882 1670         4 0687         7 1751         1 1593         .4078           .5924         37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5927         39 8065         6996         3 6926         5 7045         2 0521         .4075           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9432         .4074           .5937         42 75358         .3880 966         3 6926         5 7045         2 3291 <td></td> <td></td> <td></td> <td>5 7506</td> <td></td> <td></td> <td></td>  |        |            |            | 5 7506     |                |                  |        |
| 5917         19 2019         5632         5 1919         1 5824         8 4780         .4083           .5918         21 7770         3311         5 0052         0 8483         8 9252         .4082           .5919         24 3522         .3883 0988         4 8183         .8060 1141         9 3723         .4081           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         .29 5030         .6334         4 4439         8 6450         .9130 2661         .4079           .5922         .32 0786         .4003         4 2564         7 9102         0 7128         .4078           .5923         .34 6544         .3881 9334         3 8807         6 4399         1 6058         .4076           .5924         .37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5925         .39 8065         .6996         .3 6926         5 7045         2 0521         .4075           .5927         .44 9592         .3881 2311         .3 3157         4 2331         2 9443         .4073           .5928         .47 5358         .3880 9965         .3 1269         3 4971  |        | 14 0523    |            |            |                |                  |        |
| .5918         21 7770         .3811         5 0052         0 8483         8 9252         .4082           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         .29 5030         .6334         4 4439         8 6450         .9130 2661         .4078           .5922         .32 0786         .4003         4 2564         7 9102         0 7128         .4078           .5923         .34 6544         .3882 1670         4 0687         7 1751         1 1593         .4077           .5924         .37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5925         .39 8065         .6996         3 6926         5 7045         2 0521         .4075           .5927         .44 9592         .3881 2311         3 157         4 2331         2 9443         .4073           .5928         .47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         .2910         2 5593         1 2880<  |        |            |            |            |                |                  |        |
| .5919         24 3522         .3883 0988         4 8183         .8060 1141         9 3723         .4081           .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         29 5030         6334         4 4439         8 6450         .9130 2661         .4079           .5922         32 0786         4003         4 2564         7 9102         0 7128         .4078           .5923         34 6544         .3881 9334         3 8807         6 4399         1 6058         .4076           .5924         37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5927         39 8065         6996         3 6926         5 7045         2 0521         .4075           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         55 2665         2910         2 5593         1 2880 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>                                     |        |            |            |            |                |                  |        |
| .5920         .2326 9275         .3882 8662         .4914 6312         .8059 3796         .9129 8193         .4080           .5921         29 5030         6334         4 4439         8 6450         .9130 2661         .4079           .5922         32 0786         4003         4 2564         7 9102         0 7128         .4078           .5923         34 6544         .3881 9334         3 8807         6 4399         1 6058         .4076           .5924         37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5925         39 8065         6996         3 6926         5 7045         2 0521         .4075           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         57 8437         .3880 0554         2 3697         .8050 513 <td></td> <td></td> <td></td> <td></td> <td></td> <td>0 9202<br/>9 3723</td> <td></td>                    |        |            |            |            |                | 0 9202<br>9 3723 |        |
| .5921         29 5030         6334         4 4439         8 6450         .9130 2661         .4079           .5922         32 0786         4003         4 2564         7 9102         0 7128         .4078           .5923         34 6544         .3881 2670         4 0687         7 1751         1 1593         .4077           .5924         37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5925         39 8065         6996         3 6926         5 7045         2 0521         .4075           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4065           .5934         .62 9985         .5833         1 9898         9 0772         .6   |        |            |            |            |                |                  |        |
| .5922         32         0786         4003         4 2564         7 9102         0 7128         .4078           .5923         34 6544         .3882 1670         4 0687         7 1751         1 1593         .4077           .5924         37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5925         39 8065         6996         3 6926         5 7045         2 0521         .4074           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         57 8437         .3880 0554         2 3697         .8052 0246         .9134 2816         .4070           .5931         55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         57 8437         .3880 0554         2 3697         .8050  |        |            |            |            |                |                  |        |
| .5923         34 6544         .3882 1670         4 0687         7 1751         1 1593         .4077           .5924         37 2304         .3881 9334         3 8807         6 4399         1 6058         .4076           .5925         39 8065         6996         3 6926         5 7045         2 0521         .4075           .5926         42 3828         4654         3 5042         4 9689         2 4982         .4074           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8052 0246         .9134 2816         .4070           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         5833         1 9898         9 0772  |        |            |            |            |                |                  |        |
| .5924       37 2304       .3881 9334       3 8807       6 4399       1 6058       .4076         .5925       39 8065       6996       3 6926       5 7045       2 0521       .4075         .5926       42 3828       4654       3 5042       4 9689       2 4982       .4074         .5927       44 9592       .3881 2311       3 3157       4 2331       2 9443       .4073         .5928       47 5358       .3880 9965       3 1269       3 4971       3 3902       .4072         .5929       50 1125       7616       2 9379       2 7610       3 8359       .4071         .5930       .2352 6894       .3880 5264       .4912 7487       .8052 0246       .9134 2816       .4070         .5931       .55 2665       2910       2 5593       1 2880       4 7271       .4069         .5932       .57 8437       .3880 0554       2 3697       .8059 5513       5 1725       .4068         .5933       60 4210       .3879 8195       2 1799       .8049 8143       5 6177       .4067         .5934       62 9985       5833       1 9898       9 0772       6 0628       .4066         .5936       68 1540       .3879 1102       1 6091   |        |            |            |            |                |                  |        |
| .5925         39 8065         6996         3 6926         5 7045         2 0521         .4075           .5926         42 3828         4654         3 5042         4 9689         2 4982         .4074           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         .2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         .60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         .62 9985         .5833         1 9898         9 0772         6 0628         .4066           .5937         .70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         .73 3102         .3878 8732         1 4184         6 8647  |        |            |            | i i        |                |                  |        |
| .5926         42 3828         4654         3 5042         4 9689         2 4982         .4074           .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         .2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         .5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647  |        |            |            |            |                |                  |        |
| .5927         44 9592         .3881 2311         3 3157         4 2331         2 9443         .4073           .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5929         50 1125         7616         2 9379         2 7610         3 8359         .4071           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         .2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         .5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         .3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647   |        |            |            |            |                |                  |        |
| .5928         47 5358         .3880 9965         3 1269         3 4971         3 3902         .4072           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         .2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         .60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         .62 9985         .5833         1 9898         9 0772         6 0628         .4066           .5935         .65 5762         .3469         1 7996         8 3399         6 5078         .4065           .5936         .68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         .70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         .73 3102         .6360         1 2275         6 1268         7 8420         .4062           .5940         .2378 4670         .3878 1609         .4910 8451         .8044  |        |            |            | ľ          |                |                  |        |
| .5929         50 1125         7616         2 9379         2 7610         3 8359         .4071           .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         .55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         .57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         .36360         1 2275         6 1268         7 8420         .4062           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504   |        |            |            |            |                |                  |        |
| .5930         .2352 6894         .3880 5264         .4912 7487         .8052 0246         .9134 2816         .4070           .5931         55 2665         2910         2 5593         1 2880         4 7271         .4069           .5932         57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>                                     |        |            |            |            |                |                  |        |
| .5932         57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139  |        |            |            |            |                |                  |        |
| .5932         57 8437         .3880 0554         2 3697         .8050 5513         5 1725         .4068           .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139  | 5931   | 55 2665    | 2910       | 2 5593     | 1 2880         | 4 7271           | 4069   |
| .5933         60 4210         .3879 8195         2 1799         .8049 8143         5 6177         .4067           .5934         62 9985         5833         1 9898         9 0772         6 0628         .4066           .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630 </td <td></td> <td></td> <td>.3880 0554</td> <td></td> <td>.8050 5513</td> <td>5 1725</td> <td></td>              |        |            | .3880 0554 |            | .8050 5513     | 5 1725           |        |
| .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630         .4057           .5944         88 7824         .3877 2074         .4910 0778         1 6953         0 5068         .4056           .5945         91 3616         .3876 9684         .4909 8854         0 9561 <t< td=""><td></td><td></td><td>.3879 8195</td><td>2 1799</td><td>.8049 8143</td><td>5 6177</td><td>. 4067</td></t<>   |        |            | .3879 8195 | 2 1799     | .8049 8143     | 5 6177           | . 4067 |
| .5935         65 5762         3469         1 7996         8 3399         6 5078         .4065           .5936         68 1540         .3879 1102         1 6091         7 6024         6 9527         .4064           .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630         .4057           .5944         88 7824         .3877 2074         .4910 0778         1 6953         0 5068         .4056           .5945         91 3616         .3876 9684         .4909 8854         0 9561 <t< td=""><td>.5934</td><td>62 9985</td><td>5833</td><td>1 9898</td><td>9 0772</td><td>6 0628</td><td>. 4066</td></t<> | .5934  | 62 9985    | 5833       | 1 9898     | 9 0772         | 6 0628           | . 4066 |
| .5937         70 7320         .3878 8732         1 4184         6 8647         7 3974         .4063           .5938         73 3102         6360         1 2275         6 1268         7 8420         .4062           .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630         .4057           .5944         88 7824         .3877 2074         .4910 0778         1 6953         0 5068         .4056           .5945         91 3616         .3876 9684         .4909 8854         0 9561         0 9504         .4055           .5946         93 9411         7291         9 6929         .8040 2167         1 3940         .4054           .5947         96 5206         4896         9 5001         .8039 4770  |        | 65 5762    | 3469       | 1 7996     | 8 3399         | 6 5078           | . 4065 |
| .5938         73         3102         6360         1         2275         6         1268         7         8420         .4062           .5939         75         8885         3986         1         0364         5         3887         8         2864         .4061           .5940         .2378         4670         .3878         1609         .4910         8451         .8044         6504         .9138         7308         .4060           .5941         81         0456         .3877         9229         0         6536         3         9119         9         1750         .4059           .5942         83         6244         6846         0         4619         3         1733         .9139         6190         .4058           .5943         86         2033         4462         0         2700         2         4344         .9140         0630         .4057           .5944         88         7824         .3877         2074         .4910         0778         1         6953         0         5068         .4056           .5945         91         3616         .3876         9684         .4909         8854         0   | .5936  | 68 1540    | .3879 1102 | 1 6091     | 7 6024         | 6 9527           | .4064  |
| .5939         75 8885         3986         1 0364         5 3887         8 2864         .4061           .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630         .4057           .5944         88 7824         .3877 2074         .4910 0778         1 6953         0 5068         .4056           .5945         91 3616         .3876 9684         .4909 8854         0 9561         0 9504         .4055           .5946         93 9411         7291         9 6929         .8040 2167         1 3940         .4054           .5947         96 5206         4896         9 5001         .8039 4770         1 8374         .4053           .5948         .2399 1004         2498         9 3071         8 7372         2 2807         .4052           .5949         .2401 6803         .3876 0098         9 1139         7 9972  | .5937  |            |            |            |                |                  |        |
| .5940         .2378 4670         .3878 1609         .4910 8451         .8044 6504         .9138 7308         .4060           .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630         .4057           .5944         88 7824         .3877 2074         .4910 0778         1 6953         0 5068         .4056           .5945         91 3616         .3876 9684         .4909 8854         0 9561         0 9504         .4055           .5946         93 9411         7291         9 6929         .8040 2167         1 3940         .4054           .5947         96 5206         4896         9 5001         .8039 4770         1 8374         .4053           .5948         .2399 1004         2498         9 3071         8 7372         2 2807         .4052           .5949         .2401 6803         .3876 0098         9 1139         7 9972         2 7238         .4051   |        |            |            |            |                |                  |        |
| .5941         81 0456         .3877 9229         0 6536         3 9119         9 1750         .4059           .5942         83 6244         6846         0 4619         3 1733         .9139 6190         .4058           .5943         86 2033         4462         0 2700         2 4344         .9140 0630         .4057           .5944         88 7824         .3877 2074         .4910 0778         1 6953         0 5068         .4056           .5945         91 3616         .3876 9684         .4909 8854         0 9561         0 9504         .4055           .5946         93 9411         7291         9 6929         .8040 2167         1 3940         .4054           .5947         96 5206         4896         9 5001         .8039 4770         1 8374         .4053           .5948         .2399 1004         2498         9 3071         8 7372         2 2807         .4052           .5949         .2401 6803         .3876 0098         9 1139         7 9972         2 7238         .4051  | . 5939 |            |            |            |                |                  |        |
| .5942       83 6244       6846       0 4619       3 1733       .9139 6190       .4058         .5943       86 2033       4462       0 2700       2 4344       .9140 0630       .4057         .5944       88 7824       .3877 2074       .4910 0778       1 6953       0 5068       .4056         .5945       91 3616       .3876 9684       .4909 8854       0 9561       0 9504       .4055         .5946       93 9411       7291       9 6929       .8040 2167       1 3940       .4054         .5947       96 5206       4896       9 5001       .8039 4770       1 8374       .4053         .5948       .2399 1004       2498       9 3071       8 7372       2 2807       .4052         .5949       .2401 6803       .3876 0098       9 1139       7 9972       2 7238       .4051  | .5940  | .2378 4670 | .3878 1609 | .4910 8451 | .8044 6504     | .9138 7308       | .4060  |
| .5942       83 6244       6846       0 4619       3 1733       .9139 6190       .4058         .5943       86 2033       4462       0 2700       2 4344       .9140 0630       .4057         .5944       88 7824       .3877 2074       .4910 0778       1 6953       0 5068       .4056         .5945       91 3616       .3876 9684       .4909 8854       0 9561       0 9504       .4055         .5946       93 9411       7291       9 6929       .8040 2167       1 3940       .4054         .5947       96 5206       4896       9 5001       .8039 4770       1 8374       .4053         .5948       .2399 1004       2498       9 3071       8 7372       2 2807       .4052         .5949       .2401 6803       .3876 0098       9 1139       7 9972       2 7238       .4051  |        |            |            |            |                | 9 1750           |        |
| .5944       88 7824       .3877 2074       .4910 0778       1 6953       0 5068       .4056         .5945       91 3616       .3876 9684       .4909 8854       0 9561       0 9504       .4055         .5946       93 9411       7291       9 6929       .8040 2167       1 3940       .4054         .5947       96 5206       4896       9 5001       .8039 4770       1 8374       .4053         .5948       .2399 1004       2498       9 3071       8 7372       2 2807       .4052         .5949       .2401 6803       .3876 0098       9 1139       7 9972       2 7238       .4051  | .5942  |            |            |            |                |                  |        |
| .5945       91 3616       .3876 9684       .4909 8854       0 9561       0 9504       .4055         .5946       93 9411       7291       9 6929       .8040 2167       1 3940       .4054         .5947       96 5206       4896       9 5001       .8039 4770       1 8374       .4053         .5948       .2399 1004       2498       9 3071       8 7372       2 2807       .4052         .5949       .2401 6803       .3876 0098       9 1139       7 9972       2 7238       .4051  | .5943  | 86 2033    | }          | 0 2700     | 2 4344         | .9140 0630       | .4057  |
| .5946     93     9411     7291     9     6929     .8040     2167     1     3940     .4054       .5947     96     5206     4896     9     5001     .8039     4770     1     8374     .4053       .5948     .2399     1004     2498     9     3071     8     7372     2     2807     .4052       .5949     .2401     6803     .3876     0098     9     1139     7     9972     2     7238     .4051  |        |            |            |            |                |                  |        |
| .5947     96 5206     4896     9 5001     .8039 4770     1 8374     .4053       .5948     .2399 1004     2498     9 3071     8 7372     2 2807     .4052       .5949     .2401 6803     .3876 0098     9 1139     7 9972     2 7238     .4051  |        |            |            |            |                |                  |        |
| .5948 .2399 1004 .2498 9 3071 8 7372 2 2807 .4052 .5949 .2401 6803 .3876 0098 9 1139 7 9972 2 7238 .4051   | 1      |            |            | l i        |                |                  | 1      |
| .5949 .2401 6803 .3876 0098 9 1139 7 9972 2 7238 .4051   |        |            |            |            |                |                  |        |
|  |        |            |            |            |                |                  |        |
| .5950   .2404 2603   .3875 7695   .4908 9205   .8037 2570   .9143 1668   .4050   |        |            |            |            | l              |                  |        |
|  | .5950  | .2404 2603 | 3875 7695  | .4908 9205 | 8037 2570      | .9143 1668       | .4050  |

 $E^{-11}$   $E^{11}$  .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.5950 .4050

| p                       | x                  | z                          | √pq                                | $\sqrt{1-p^2}$             | $\sqrt{1-q^2}$             | q                       |
|-------------------------|--------------------|----------------------------|------------------------------------|----------------------------|----------------------------|-------------------------|
| .5950                   | .2404 2603         | .3875 7695                 | .4908 9205                         | .8037 2570                 | .9143 1668                 | .4050                   |
| .5951                   | 06 8405            | 5289                       | 8 7268                             | 6 5166                     | 3 6097                     | .4049                   |
| .5952                   | 09 4209            | 2881                       | 8 5330                             | 5 7760                     | 4 0525                     | .4048                   |
| .5953                   | 12 0014            | .3875 0471                 | 8 3389                             | 5 0352                     | 4 4951                     | .4047                   |
| .5954                   | 14 5821            | .3874 8057                 | 8 1447                             | 4 2942                     | 4 9376                     | . 4046                  |
| .5955                   | 17 1630            | 5641                       | 7 9502                             | 3 5531                     | 5 3800                     | . 4045                  |
| .5956                   | 19 7440            | 3223                       | 7 7555                             | 2 8117                     | 5 8222                     | . 4044                  |
| .5957                   | 22 3252            | .3874 0802                 | 7 5606                             | 2 0702                     | 6 2643                     | .4043                   |
| .5958                   | 24 9065            | .3873 8378                 | 7 3655                             | 1 3284                     | 6 7063                     | .4042                   |
| .5959                   | 27 4880            | 5952                       | 7 1702                             | .8030 5865                 | 7 1481                     | .4041                   |
| .5960                   | .2430 0697         | .3873 3523                 | .4906 9746                         | .8029 8443                 | .9147 5898                 | .4040                   |
| .5961                   | 32 6515            | .3873 1092                 | 6 7789                             | 9 1020                     | 8 0314                     | .4039                   |
| .5962                   | 35 2335            | .3872 8658                 | 6 5829                             | 8 3595                     | 8 4729                     | .4038                   |
| .5963                   | 37 8156            | 6221                       | 6 3868                             | 7 6168                     | 8 9142                     | .4037                   |
| .5964                   | 40 3979            | 3782                       | 6 1904                             | 6 8739                     | 9 3554                     | .4036                   |
| .5965                   | 42 9804            | .3872 1341                 | 5 9938                             | 6 1308                     | .9149 7964                 | .4035                   |
| .5966                   | 45 5631            | .3871 8896                 | 5 7970                             | 5 3875                     | .9150 2374                 | .4034                   |
| .5967                   | 48 1459            | 6450                       | 5 6000                             | 4 6440                     | 0 6782                     | .4033                   |
| .5968                   | 50 7288            | 4000                       | 5 4027                             | 3 9003                     | 1 1188                     | .4032                   |
| .5969                   | 53 3119            | .3871 1548                 | 5 2053                             | 3 1564                     | 1 5594                     | .4031                   |
| .5970                   | .2455 8952         | .3870 9093                 | .4905 0076                         | .8022 4124                 | .9151 9998                 | .4030                   |
| .5971                   | 58 4787            | 6636                       | 4 8098                             | 1 6681                     | 2 4401                     | .4029                   |
| .5972                   | 61 0623            | 4177                       | 4 6117                             | 0 9236                     | 2 8802                     | .4028                   |
| .5973                   | 63 6461            | .3870 1714                 | 4 4134                             | .8020 1790                 | 3 3202                     | .4027                   |
| .5974                   | 66 2300            | .3869 9249                 | 4 2149                             | .8019 4341                 | 3 7601                     | .4026                   |
| .5975                   | 68 8141            | 6782                       | 4 0162                             | 8 6891                     | 4 1999                     | .4025                   |
| .5976                   | 71 3984            | 4312                       | 3 8173                             | 7 9439                     | 4 6395                     | .4024                   |
| .5977                   | 73 9829            | .3869 1839                 | 3 6182                             | 7 1985                     | 5 0790                     | .4023                   |
| .5978                   | 76 5675            | .3868 9364                 | 3 4188                             | 6 4528                     | 5 5183                     | .4022                   |
| .5979                   | 79 1522            | 6886                       | 3 2192                             | 5 7070                     | 5 9576                     | .4021                   |
| .5980                   | .2481 7372         | .3868 4405                 | .4903 0195                         | .8014 9610                 | .9156 3967                 | .4020                   |
| .5981                   | 84 3223            | .3868 1922                 | 2 8195                             | 4 2148                     | 6 8356                     | .4019                   |
| .5982                   | 86 9076            | .3867 9437                 | 2 6193                             | 3 4684                     | 7 2745                     | .4018                   |
| .5983                   | 89 4930            | 6948                       | 2 4189                             | 2 7218                     | 7 7132                     | .4017                   |
| .5984                   | 92 0786            | 4458                       | 2 2183                             | 1 9750                     | 8 1518                     | .4016                   |
| .5985                   | 94 6644            | .3867 1964                 | 2 0174                             | 1 2281                     | 8 5902                     | .4015                   |
| .5986                   | 97 2503            | .3866 9468                 | 1 8164                             | .8010 4809                 | 9 0286                     | .4014                   |
| .5987                   | .2499 8364         | 6970                       | 1 6151                             | .8009 7335                 | 9 4667                     | .4013                   |
| .5988                   | .2502 4227         | 4469                       | 1 4137                             | 8 9860                     | .9159 9048                 | .4012                   |
| .5989                   | 05 0091            | .3866 1965                 | 1 2120                             | 8 2382                     | .9160 3427                 | .4011                   |
| .5990                   | .2507 5957         | .3865 9459                 | .4901 0101                         | .8007 4902                 | .9160 7805                 | .4010                   |
| .5991                   | 10 1825            | 6950                       | 0 8080                             | 6 7421                     | 1 2182                     | .4009                   |
| .5992                   | 12 7694            | 4438                       | 0 6057                             | 5 9938                     | 1 6557                     | .4008                   |
| .5993                   | 15 3565            | .3865 1924                 | 0 4031                             | 5 2452                     | 2 0932                     | .4007                   |
| .5994<br>.5995<br>.5996 | 17 9438<br>20 5313 | .3864 9408<br>6888<br>4367 | .4900 2004<br>.4899 9974<br>9 7943 | 4 4965<br>3 7476<br>2 9984 | 2 5304<br>2 9676<br>3 4046 | .4006<br>.4005<br>.4004 |
| .5997                   | 25 7066            | .3864 1842                 | 9 5909                             | 2 2491                     | 3 8415                     | .4003                   |
| .5998                   |                    | .3863 9315                 | 9 3873                             | 1 4996                     | 4 2783                     | .4002                   |
| .5999                   |                    | 6786                       | 9 1835                             | 0 7499                     | 4 7149                     | .4001                   |
| .6000                   | .2533 4710         | .3863 4253                 | .4898 9795                         | .8000 0000                 | .9165 1514                 | .4000                   |

E-11 E11 - 0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.6000 .4000

| P              | x                     | z                    | √pq                  | $\sqrt{1-p^2}$                        | $\sqrt{1-q^2}$       | q              |
|----------------|-----------------------|----------------------|----------------------|---------------------------------------|----------------------|----------------|
| .6000          | .2533 4710            | .3863 4253           | .4898 9795           | .8000 0000                            | .9165 1514           | .4000          |
| .6001          | 36 0595               | 3 1719               | 8 7753               | .7999 2499                            | 5 5878               | .3999          |
| .6002          | 38 6481               | 2 9181               | 8 5708               | 8 4996                                | 6 0240               | .3998          |
| .6003          | 41 2369               | 2 6641               | 8 3662               | 7 7491                                | 6 4601               | .3997          |
| .6004<br>.6005 | 43 8259<br>46 4150    | 2 4099<br>2 1554     | 8 1613<br>7 9562     | 6 9984<br>6 2476                      | 6 8961<br>7 3319     | .3996<br>.3995 |
| .6006          | 49 0043               | 1 9006               | 7 7509               | 5 4965                                | 7 7677               | .3994          |
| .6007          | 51 5938               | 1 6456               | 7 5454               | 4 7452                                | . 8 2033             | .3993          |
| .6008          | 54 1835               | 1 3903               | 7 3397               | 3 9937                                | 8 6387               | .3992          |
| .6009          | 56 7733               | 1 1347               | 7 1338               | 3 2421                                | 9 0741               | .3991          |
| .6010          | .2559 3633            | .3860 8789           | .4896 9276           | .7992 4902                            | .9169 5093           | .3990          |
| .6011          | 61 9535               | 0 6229               | 6 7212               | 1 7382                                | .9169 9443           | .3989          |
| .6012<br>.6013 | 64 5438<br>67 1343    | 0 3665<br>.3860 1099 | 6 5147<br>6 3079     | 0 9859<br>. <b>7</b> 990 <b>2</b> 335 | .9170 3793<br>0 8141 | .3988<br>.3987 |
| .6014          | 69 7250               | .3859 8531           | 6 1009               | .7989 4808                            | 1 2488               | .3986          |
| .6015          | 72 3159               | 9 5960               | 5 8937               | 8 7280                                | 1 6833               | .3985          |
| .6016          | 74 9069               | 9 3386               | 5 6863               | 7 9750                                | 2 1177               | .3984          |
| .6017          | 77 4981               | 9 0810               | 5 4786               | 7 2217                                | 2 5520               | .3983          |
| .6018<br>.6019 | 80 0895<br>82 6811    | 8 8231<br>8 5650     | 5 2708<br>5 0627     | 6 4683<br>5 7147                      | 2 9862<br>3 4202     | .3982<br>.3981 |
| .6020          | .2585 2728            | .3858 3066           | .4894 8544           | .7984 9609                            | .9173 8542           | .3980          |
| .6021          | 87 8647               | 8 0479               | 4 6460               | 4, 2068                               | 4 2879               | .3979          |
| .6022          | 90 4568               | 7 7890               | 4 4373               | 3 4526                                | 4 7216               | .3978          |
| .6023          | 93 0490               | 7 5299               | 4 2283               | .2 6982                               | 5 1551               | .3977          |
| .6024<br>.6025 | 95 6414<br>.2598 2340 | 7 2704<br>7 0107     | 4 0192<br>3 8099     | 1 94 <u>3</u> 6<br>1 1888             | 5 5885<br>6 0217     | .3976<br>.3975 |
| .6026          | .2600 8268            | 6 7508               | 3 6003               | .7980 4338                            | 6 4549               | .3974          |
| .6027          | 03 4197               | 6 4906               | 3 3905               | .7979 6786                            | 6 8879               | .3973          |
| .6028          | 06 0128               | 6 2301               | 3 1806               | 8 9232                                | 7 3207               | .3972          |
| .6029          | 08 6061               | 5 9694               | 2 9704               | 8 1676                                | 7 7535               | .3971          |
| .6030          | .2611 1996            | .3855 7084           | .4892 7600           | .7977 4119                            | .9178 1861           | .3970          |
| .6031<br>.6032 | 13 7932<br>16 3871    | 5 4471<br>5 1856     | 2 5493<br>2 3385     | 6 6559<br>5 8997                      | 8 6186<br>9 0509     | .3969<br>.3968 |
| .6033          | 18 9811               | 4 9238               | 2 1275               | 5 1433                                | 9 4832               | .3967          |
| .6034          | 21 5752               | 4 6618               | 1 9162               | 4 3867                                | .9179 9153           | .3966          |
| .6035          | 24 1696               | 4 3995               | 1 7047               | 3 6300                                | .9180 3472           | .3965          |
| .6036          | 26 7641               | 4 1370               | 1 4930               | 2 8730                                | 0 7791               | .3964          |
| .6037<br>.6038 | 29 3588<br>31 9537    | 3 8742<br>3 6111     | 1 2811<br>1 0690     | 2 1158<br>1 3585                      | 1 2108<br>1 6423     | .3963<br>.3962 |
| .6039          | 34 5488               | 3 3478               | 0 8567               | .7970 6009                            | 2 0738               | .3961          |
| .6040          | .2637 1440            | .3853 0842           | .4890 6441           | .7969 8432                            | .9182 5051           | .3960          |
| .6041          | 39 7394               | 2 8204               | 0 4314               | 9 0852                                | 2 9363               | .3959          |
| .6042<br>.6043 | 42 3350<br>44 9308    | 2 5563<br>2 2919     | 0 2184<br>.4890 0052 | 8 3271<br>7 5687                      | 3 3674               | .3958          |
|                |                       |                      |                      | 7 5687                                | 3 7983               | .3957          |
| .6044<br>.6045 | 47 5267<br>50 1228    | 2 0273<br>1 7624     | .4889 7918<br>9 5782 | 6 8102<br>6 0514                      | 4 2291<br>4 6598     | .3956          |
| .6046          | 52 7191               | 1 4972               | 9 3644               | 5 2925                                | 5 0903               | .3954          |
| .6047          | 55 3156               | 1 2318               | 9 1503               | 4 5333                                | 5 5207               | .3953          |
| .6048<br>.6049 | 57 9122<br>60 5091    | 0 9662<br>0 7003     | 8 9361<br>8 7216     | 3 7740<br>3 0144                      | 5 9510<br>6 3812     | .3952<br>.3951 |
| .6050          | [ <del></del>         |                      | .4888 5069           |                                       |                      |                |
| .0000          | .2663 1061            | .3850 4341           | 1 .4000 0009         | .7962 2547                            | .9186 8112           | .3950          |

E-11 E12.0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| P              | x                  | Z                        | √pq                      | $\sqrt{1-p^2}$   | $\sqrt{1-q^2}$   | q              |
|----------------|--------------------|--------------------------|--------------------------|------------------|------------------|----------------|
| .6050          | . 2663 1061        | .3850 4341               | .4888 5069               | .7962 2547       | .9186 8112       | .3950          |
| .6051          | 65 7033            | .3850 1676               | 8 2920                   | 1 4948           | 7 2411           | .3949          |
| .6052          | 68 3007            | .3849 9009               | 8 0769                   | .7960 7346       | 7 6709           | .3948          |
| .6053          | 70 8982            | 9 6340                   | 7 8616                   | .7959 9743       | 8 1005           | .3947          |
| .6054          | 73 4960            | 9 3668                   | 7 6461                   | 9 2138           | 8 5300           | .3946          |
| .6055          | <b>7</b> 6 0939    | 9 0993                   | 7 4303                   | 8 4531           | 8 9594           | .3945          |
| .6056          | 78 6920            | 8 8315                   | 7 2143                   | 7 6921           | 9 3887           | .3944          |
| .6057          | 81 2903            | 8 5635                   | 6 9982                   | 6 9310           | .9189 8178       | .3943          |
| .6058          | 83 8887            | 8 2953                   | 6 7818                   | 6 1697           | .9190 2468       | .3942          |
| .6059          | 86 4874            | 8 0268                   | 6 5652                   | 5 4082           | 0 6757           | .3941          |
| .6060          | .2689 0862         | .3847 7580               | .4886 3483               | .7954 6464       | .9191 1044       | .3940          |
| .6061          | 91 6852            | 7 4889                   | 6 1313                   | 3 8845           | 1 5330           | .3939          |
| .6062          | 94 2844            | 7 2196                   | 5 9140                   | 3 1224           | 1 9615           | .3938          |
| .6063          | 96 8838            | 6 9501                   | 5 6966                   | 2 3601           | 2 3898           | .3937          |
| .6064          | . 2699 4833        | 6 6803                   | 5 4789                   | 1 5976           | 2 8181           | .3936          |
| .6065          | .2702 0831         | 6 4102                   | 5 2610                   | 0 8349           | 3 2462           | .3935          |
| .6066          | 04 6830            | 6 1398                   | 5 0429                   | .7950 0719       | 3 6741           | .3934          |
| .6067          | 07 2831            | 5 8693                   | 4 8246                   | .7949 3088       | 4 1020           | .3933          |
| .6068          | 09 8834            | 5 5984                   | 4 6060                   | 8 5455           | 4 5297           | .3932          |
| .6069          | 12 4838            | 5 3273                   | 4 3873                   | 7 7820           | 4 9573           | .3931          |
| .6070          | .2715 0845         | .3845 0559               | .4884 1683               | .7947 0183       | .9195 3847       | .3930          |
| .6071          | 17 6853            | 4 7843                   | 3 9491                   | 6 2544           | 5 8120           | .3929          |
| .6072          | 20 2864            | 4 5124                   | 3 7297                   | 5 4903           | 6 2392           | .3928          |
| .6073          | 22 8876            | 4 2402                   | 3 5101                   | 4 7260           | 6 6663           | .3927          |
| .6074          | 25 4890            | 3 9678                   | 3 2903                   | 3 9615           | 7 0932           | .3926          |
| .6075          | 28 0905            | 3 6951                   | 3 0702                   | 3 1968           | 7 5200           | . 3925         |
| .6076          | 30 6923            | 3 4222                   | 2 8500                   | 2 4319           | 7 9467           | .3924          |
| .6077          | 33 2943            | 3 1490                   | 2 6295                   | 1 6668           | 8 3733           | .3923          |
| .6078          | 35 8964            | 2 8755                   | 2 4088                   | 0 9015           | 8 7997           | .3922          |
| .6079          | 38 4987            | 2 6018                   | 2 1879                   | .7940 1360       | 9 2260           | .3921          |
| .6080          | .2741 1012         | .3842 3278               | .4881 9668               | .7939 3703       | .9199 6522       | .3920          |
| .6081          | 43 7039            | 2 0536                   | 1 7455                   | 8 6043           | .9200 0782       | .3919          |
| .6082          | 46 3068            | 1 7791                   | 1 5239                   | 7 8382           | 0 5041           | .3918          |
| .6083          | 48 9098            | 1 5043                   | 1 3022                   | 7 0719           | 0 9299           | .3917          |
| .6084          | 51 5130            | 1 2293                   | 1 0802                   | 6 3054           | 1 3556           | .3916          |
| .6085<br>.6086 | 54 1165<br>56 7201 | 0 9540                   | 0 8580                   | 5 5387<br>4 7718 | 1 7811<br>2 2065 | .3915          |
|                |                    | 0 6785                   | 0 6356                   |                  |                  | .3914          |
| .6087          | 59 3239<br>61 9279 | 0 4027                   | 0 4130                   | 4 0047<br>3 2374 | 2 6317<br>3 0569 | .3913<br>.3912 |
| .6088<br>.6089 | 64 5320            | .3840 1266<br>.3839 8503 | .4880 1902<br>.4879 9671 | 2 4699           | 3 4819           | .3912          |
| .6090          | .2767 1364         | .3839 5737               | .4879 7438               | .7931 7022       | .9203 9068       | .3910          |
| .6091          | 69 7409            | 9 2968                   | 9 5204                   | 0 9343           | 4 3315           | .3909          |
| .6092          | 72 3457            | 9 0197                   | 9 2967                   | .7930 1662       | 4 7562           | .3908          |
| .6093          | 74 9506            | 8 7424                   | 9 0728                   | .7929 3979       | 5 1807           | .3907          |
| .6094          | 77 5557            | 8 4647                   | 8 8486                   | 8 6294           | 5 6050           | .3906          |
| .6095          | 80 1610            | 8 1869                   | 8 6243                   | 7 8607           | 6 0293           | .3905          |
| .6096          | 82 7665            | 7 9087                   | 8 3997                   | 7 0918           | 6 4534           | .3904          |
| .6097          | 85 3721            | 7 6303                   | 8 1750                   | 6 3227           | 6 8774           | .3903          |
| .6098          | 87 9780            | 7 3516                   | 7 9500                   | 5 5534           | 7 3012           | .3902          |
| .6099          | 90 5841            | 7 0727                   | 7 7248                   | 4 7838           | 7 7250           | .3901          |
| .6100          | .2793 1903         | .3836 7935               | .4877 4994               | .7924 0141       | .9208 1486       | .3900          |

 $E^{-ii} = E^{ii} = .0000,0000 \div .0000,0000 + .00000,0000 + .0000,000000 + .0000,0000 + .0000,0000 + .0000,0000 + .0000,0000 + .0000,00000 + .0000,0000 + .0000,0000 + .0000,00000 + .0000,0000 + .0000$ 

.6100 .3900

| .6100          |                    |                          |                  |                          |                      | .3900          |
|----------------|--------------------|--------------------------|------------------|--------------------------|----------------------|----------------|
| p              | x                  | z                        | √pq              | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q              |
| .6100          | .2793 1903         | .3836 7935               | .4877 4994       | .7924 0141               | .9208 1486           | .3900          |
| .6101          | 95 7967            | 6 5141                   | 7 2737           | 3 2442                   | 8 5720               | .3899          |
| .6102          | .2798 4034         | 6 2344                   | 7 0479           | 2 4741                   | 8 9954               | .3898          |
| .6103          | .2801 0102         | 5 9544                   | 6 8218           | 1 7038                   | 9 4186               | .3897          |
| .6104          | 03 6172            | 5 6742                   | 6 5955           | 0 9333                   | .9209 8417           | .3896          |
| .6105<br>.6106 | 06 2244<br>08 8318 | 5 3937<br>5 1129         | 6 3690<br>6 1423 | .7920 1626<br>.7919 3916 | .9210 2647<br>0 6875 | .3895<br>.3894 |
| ,              |                    |                          |                  |                          |                      |                |
| .6107<br>.6108 | 11 4394<br>14 0472 | 4 8319<br>4 5506         | 5 9154<br>5 6883 | 8 6205<br>7 8492         | 1 1102<br>1 5328     | .3893<br>.3892 |
| .6109          | 16 6551            | 4 2691                   | 5 4609           | 7 0777                   | 1 9552               | .3891          |
| .6110          | .2819 2633         | .3833 9873               | .4875 2333       | .7916 3060               | .9212 3775           | .3890          |
| .6111          | 21 8716            | 3 7052                   | 5 0055           | 5 5340                   | 2 7997               | .3889          |
| .6112          | 24 4802            | 3 4229                   | 4 7775           | 4 7619                   | 3 2218               | .3888          |
| .6113          | 27 0889            | 3 1403                   | 4 5493           | 3 9896                   | 3 6437               | .3887          |
| .6114          | 29 6978            | 2 8575                   | 4 3209           | 3 2170                   | 4 0656               | .3886          |
| .6115<br>.6116 | 32 3069<br>34 9162 | 2 5744<br>2 2910         | 4 0922<br>3 8634 | 2 4443<br>1 6714         | 4 4872<br>4 9088     | .3885<br>.3884 |
|                |                    |                          |                  |                          |                      |                |
| .6117<br>.6118 | 37 5257<br>40 1354 | 2 0074<br>1 <b>72</b> 35 | 3 6343<br>3 4050 | 0 8982<br>.7910 1249     | 5 3302<br>5 7515     | .3883<br>.3882 |
| .6119          | 42 7453            | 1 4394                   | 3 1755           | .7909 3514               | 6 1727               | .3881          |
| .6120          | .2845 3554         | .3831 1550               | .4872 9457       | .7908 5776               | .9216 5937           | .3880          |
| .6121          | 47 9657            | 0 8703                   | 2 7158           | 7 8037                   | 7 0146               | .3879          |
| .6122          | 50 5761            | 0 5854                   | 2 4856           | 7 0295                   | 7 4354               | .3878          |
| .6123          | 53 1868            | 0 3002                   | 2 2552           | 6 2552                   | 7 8561               | .3877          |
| .6124          | 55 7977            | .3830 0148               | 2 0246           | 5 4806                   | 8 2766               | .3876          |
| .6125<br>.6126 | 58 4087<br>61 0200 | .3829 7291<br>9 4431     | 1 7938<br>1 5628 | 4 7059<br>3 9309         | 8 6970<br>9 1173     | .3875<br>.3874 |
| l              | l                  |                          | ì                | l                        | i                    |                |
| .6127<br>.6128 | 63 6314<br>66 2430 | 9 1568<br>8 8704         | 1 3315<br>1 1001 | 3 1558<br>2 3804         | 9 5375<br>.9219 9575 | .3873<br>.3872 |
| .6129          | 68 8549            | 8 5836                   | 0 8684           | 1 6048                   | .9220 3774           | .3871          |
| .6130          | . 2871 4669        | .3828 2966               | .4870 6365       | .7900 8291               | .9220 7971           | .3870          |
| .6131          | 74 0791            | 8 0093                   | 0 4044           | .7900 0531               | 1 2168               | .3869          |
| .6132          | 76 6916            | 7 7218                   | .4870 1721       | .7899 2769               | 1 6363               | .3868          |
| .6133          | 79 3042            | 7 4340                   | .4869 9395       | 8 5006                   | 2 0557               | .3867          |
| .6134          | 81 9170            | 7 1459                   | 9 7068           | 7 7240                   | 2 4749               | .3866          |
| .6135          | 84 5300<br>87 1433 | 6 8576<br>6 5690         | 9 4738<br>9 2406 | 6 9472<br>6 1702         | 2 8941<br>3 3131     | .3865<br>.3864 |
| 1              | İ                  | 6 2802                   |                  |                          |                      | l              |
| .6137          | 89 7567<br>92 3703 | 5 9910                   | 9 0072<br>8 7736 | 5 3930<br>4 6156         | 3 7319<br>4 1507     | .3863<br>.3862 |
| .6139          | 94 9841            | 5 7017                   | 8 5397           | 3 8380                   | 4 5693               | .3861          |
| .6140          | .2897 5981         | .3825 4121               | .4868 3057       | .7893 0602               | .9224 9878           | .3860          |
| .6141          | .2900 2123         | 5 1222                   | 8 0714           | 2 2822                   | 5 4062               | .3859          |
| .6142          | 02 8267            | 4 8320                   | 7 8369           | 1 5040                   | 5 8244               | .3858          |
| .6143          | 05 4413            | 4 5416                   | 7 6022           | .7890 7256               | 6 2425               | .3857          |
| .6144          | 08 0561            | 4 2509                   | 7 3673           | .7889 9470               | 6 6605               | .3856          |
| .6145          | 10 6711<br>13 2863 | 3 9600<br>3 6688         | 7 1321<br>6 8968 | 9 1682<br>8 3892         | 7 0784<br>7 4961     | .3855          |
| .6147          | 15 9016            | 3 3773                   | 6 6612           |                          | 7 9137               | Ì              |
| .6148          | 18 5172            | 3 0856                   | 6 4254           | 7 6100<br>6 8305         | 8 3312               | .3853          |
| .6149          | 21 1330            | 2 7936                   | 6 1894           | 6 0509                   | 8 7485               | .3851          |
| .6150          | .2923 7490         | .3822 5014               | .4865 9531       | .7885 2711               | .9229 1657           | .3850          |
| -IL            | -IL 0000 0000      |                          |                  |                          |                      |                |

E-II EII-.0000,0000+.0000,0000+.0000,0000+.0000,0000+.0000,0000+

| p     | x           | . z        | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .6150 | .2923 7490  | .3822 5014 | .4865 9531 | .7885 2711     | .9229 1657     | .3850 |
| .6151 | 26 3652     | 2 2089     | 5 7167     | 4 4910         | 9 5828         | .3849 |
| .6152 | 28 9816     | 1 9161     | 5 4800     | 3 7108         | .9229 9998     | .3848 |
| .6153 | 31 5982     | 1 6231     | 5 2432     | 2 9304         | .9230 4166     | .3847 |
| .6154 | 34 2149     | 1 3298     | 5 0061     | 2 1497         | 0 8333         | .3846 |
| .6155 | 36 8319     | 1 0362     | 4 7688     | 1 3689         | 1 2499         | .3845 |
| .6156 | 39 4491     | 0 7424     | 4 5312     | .7880 5878     | 1 6664         | .3844 |
| .6157 | 42 0665     | 0 4483     | 4 2935     | .7879 8065     | 2 0827         | .3843 |
| .6158 | 44 6841     | .3820 1540 | 4 0555     | 9 0251         | 2 4989         | .3842 |
| .6159 | 47 3019     | .3819 8594 | 3 8173     | 8 2434         | 2 9150         | .3841 |
| .6160 | .2949 9199  | .3819 5645 | .4863 5789 | .7877 4615     | .9233 3309     | .3840 |
| .6161 | 52 5381     | 9 2694     | 3 3403     | 6 6794         | 3 7467         | .3839 |
| .6162 | 55 1565     | 8 9740     | 3 1015     | 5 8972         | 4 1624         | .3838 |
| .6163 | 57 7751     | 8 6784     | 2 8624     | 5 1147         | 4 5780         | .3837 |
| .6164 | 60 3939     | 8 3825     | 2 6232     | 4 3320         | 4 9934         | .3836 |
| .6165 | 63 0129     | 8 0863     | 2 3837     | 3 5491         | 5 4088         | .3835 |
| .6166 | 65 6321     | 7 7899     | 2 1440     | 2 7660         | 5 8239         | .3834 |
| .6167 | 68 2515     | 7 4932     | 1 9041     | 1 9827         | 6 2390         | .3833 |
| .6168 | 70 8711     | 7 1962     | 1 6639     | 1 1991         | 6 6539         | .3832 |
| .6169 | 73 4910     | 6 8990     | 1 4236     | .7870 4154     | 7 0687         | .3831 |
| .6170 | .2976 1110  | .3816 6015 | .4861 1830 | .7869 6315     | .9237 4834     | .3830 |
| .6171 | 78 7312     | 6 3038     | 0 9422     | 8 8474         | 7 8980         | .3829 |
| .6172 | 81 3517     | 6 0058     | 0 7012     | 8 0630         | 8 3124         | .3828 |
| .6173 | 83 9723     | 5 7075     | 0 4600     | 7 2785         | 8 7267         | .3827 |
| .6174 | 86 5932     | 5 4090     | .4860 2185 | 6 4938         | 9 1409         | .3826 |
| .6175 | 89 2142     | 5 1102     | .4859 9769 | 5 7088         | 9 5549         | .3825 |
| .6176 | 91 8355     | 4 8111     | 9 7350     | 4 9236         | .9239 9688     | .3824 |
| .6177 | 94 4570     | 4 5118     | 9 4929     | 4 1383         | .9240 3826     | .3823 |
| .6178 | 97 0786     | 4 2123     | 9 2506     | 3 3527         | 0 7963         | .3822 |
| .6179 | . 2999 7005 | 3 9124     | 9 0080     | 2 5669         | 1 2098         | .3821 |
| .6180 | .3002 3226  | .3813 6123 | .4858 7653 | .7861 7810     | .9241 6232     | .3820 |
| .6181 | 04 9449     | 3 3120     | 8 5223     | 0 9948         | 2 0365         | .3819 |
| .6182 | 07 5674     | 3 0113     | 8 2791     | .7860 2084     | 2 4497         | .3818 |
| .6183 | 10 1901     | 2 7104     | 8 0357     | .7859 4218     | 2 8627         | .3817 |
| .6184 | 12 8130     | 2 4093     | 7 7921     | 8 6350         | 3· 2756        | .3816 |
| .6185 | 15 4361     | 2 1079     | 7 5482     | 7 8480         | 3 6884         | .3815 |
| .6186 | 18 0594     | 1 8062     | 7 3042     | 7 0608         | 4 1010         | .3814 |
| .6187 | 20 6830     | 1 5043     | 7 0599     | 6 2734         | 4 5136         | .3813 |
| .6188 | 23 3067     | 1 2021     | 6 8154     | 5 4857         | 4 9260         | .3812 |
| .6189 | 25 9306     | 0 8996     | 6 5707     | 4 6979         | 5 3382         | .3811 |
| .6190 | .3028 5548  | .3810 5969 | .4856 3258 | .7853 9099     | .9245 7504     | .3810 |
| .6191 | 31 1792     | .3810 2939 | 6 0806     | 3 1216         | 6 1624         | .3809 |
| .6192 | 33 8037     | .3809 9906 | 5 8353     | 2 3332         | 6 5743         | .3808 |
| .6193 | 36 4285     | 9 6871     | 5 5897     | 1 5445         | 6 9860         | .3807 |
| .6194 | 39 0535     | 9 3834     | 5 3439     | .7850 7556     | 7 3977         | .3806 |
| .6195 | 41 6787     | 9 0793     | 5 0978     | .7849 9666     | 7 8092         | .3805 |
| .6196 | 44 3041     | 8 7750     | 4 8516     | 9 1773         | 8 2206         | .3804 |
| .6197 | 46 9298     | 8 4705     | 4 6051     | 8 3878         | 8 6318         | .3803 |
| .6198 | 49 5556     | 8 1656     | 4 3585     | 7 5981         | 9 0430         | .3802 |
| .6199 | 52 1816     | 7 8606     | 4 1116     | 6 8082         | 9 4540         | .3801 |
| .6200 | .3054 8079  | .3807 5552 | .4853 8644 | .7846 0181     | .9249 8649     | .3800 |

 $E^{-i}I_{\pm}$   $E^{i}I_{\pm}$   $E^$ 

.6200 .3800

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .6200 | .3054 8079 | .3807 5552 | .4853 8644 | .7846 0181     | .9249 8649     | .3800 |
| .6201 | 57 4344    | 7 2496     | 3 6171     | 5 2278         | .9250 2756     | .3799 |
| .6202 | 60 0610    | 6 9437     | 3 3696     | 4 4373         | 0 6862         | .3798 |
| .6203 | 62 6879    | 6 6376     | 3 1218     | 3 6465         | 1 0967         | .3797 |
| .6204 | 65 3150    | 6 3312     | 2 8738     | 2 8556         | 1 5071         | .3796 |
| .6205 | 67 9423    | 6 0245     | 2 6256     | 2 0645         | 1 9174         | .3795 |
| .6206 | 70 5698    | 5 7176     | 2 3771     | 1 2731         | 2 3275         | .3794 |
| .6207 | 73 1975    | 5 4104     | 2 1285     | .7840 4816     | 2 7375         | .3793 |
| .6208 | 75 8255    | 5 1029     | 1 8796     | .7839 7898     | 3 1474         | .3792 |
| .6209 | 78 4536    | 4 7952     | 1 6306     | 8 9978         | 3 5571         | .3791 |
| .6210 | .3081 0820 | .3804 4873 | .4851 3812 | .7838 1056     | .9253 9667     | .3790 |
| .6211 | 83 7106    | 4 1790     | 1 1317     | 7 3133         | 4 3762         | .3789 |
| .6212 | 86 3394    | 3 8705     | 0 8820     | 6 5207         | 4 7856         | .3788 |
| .6213 | 88 9684    | 3 5618     | 0 6320     | 5 7279         | 5 1948         | .3787 |
| .6214 | 91 5976    | 3 2527     | 0 3818     | 4 9348         | 5 6039         | .3786 |
| .6215 | 94 2271    | 2 9434     | .4850 1314 | 4 1416         | 6 0129         | .3785 |
| .6216 | 96 8567    | 2 6339     | .4849 8808 | 3 3482         | 6 4218         | .3784 |
| .6217 | .3099 4866 | 2 3241     | 9 6300     | 2 5546         | 6 8305         | .3783 |
| .6218 | .3102 1167 | 2 0140     | 9 3789     | 1 7607         | 7 2391         | .3782 |
| .6219 | 04 7470    | 1 7036     | 9 1277     | 0 9667         | 7 6476         | .3781 |
| .6220 | .3107 3775 | .3801 3930 | .4848 8762 | .7830 1724     | .9258 0560     | .3780 |
| .6221 | 10 0082    | 1 0822     | 8 6244     | .7829 3779     | 8 4642         | .3779 |
| .6222 | 12 6392    | 0 7710     | 8 3725     | 8 5833         | 8 8723         | .3778 |
| .6223 | 15 2703    | 0 4596     | 8 1204     | 7 7884         | 9 2803         | .3777 |
| .6224 | 17 9017    | .3800 1480 | 7 8680     | 6 9933         | .9259 6881     | .3776 |
| .6225 | 20 5333    | .3799 8361 | 7 6154     | 6 1980         | .9260 0958     | .3775 |
| .6226 | 23 1651    | 9 5239     | 7 3626     | 5 4025         | 0 5034         | .3774 |
| .6227 | 25 7971    | 9 2114     | 7 1096     | 4 6068         | 0 9109         | .3773 |
| .6228 | 28 4293    | 8 8987     | 6 8563     | 3 8108         | 1 3183         | .3772 |
| .6229 | 31 0617    | 8 5857     | 6 6028     | 3 0147         | 1 <b>72</b> 55 | .3771 |
| .6230 | .3133 6944 | .3798 2725 | .4846 3491 | .7822 2184     | .9262 1326     | .3770 |
| .6231 | 36 3273    | 7 9590     | 6 0952     | 1 4218         | 2 5396         | .3769 |
| .6232 | 38 9604    | 7 6452     | 5 8411     | .7820 6250     | 2 9464         | .3768 |
| .6233 | 41 5937    | 7 3312     | 5 5868     | .7819 8281     | 3 3531         | .3767 |
| .6234 | 44' 2272   | 7 0169     | 5 3322     | 9 0309         | 3 7597         | .3766 |
| .6235 | 46 8610    | 6 7024     | 5 0774     | 8 2335         | 4 1662         | .3765 |
| .6236 | 49 4949    | 6 3875     | 4 8224     | 7 4359         | 4 5725         | .3764 |
| .6237 | 52 1291    | 6 0725     | 4 5672     | 6 6381         | 4 9787         | .3763 |
| .6238 | 54 7635    | 5 7571     | 4 3117     | 5 8401         | 5 3848         | .3762 |
| .6239 | 57 3982    | 5 4415     | 4 0560     | 5 0418         | 5 <b>7</b> 908 | .3761 |
| .6240 | .3160 0330 | .3795 1256 | .4843 8002 | .7814 2434     | .9266 1966     | .3760 |
| .6241 | 62 6681    | 4 8095     | 3 5441     | 3 4448         | 6 6023         | .3759 |
| .6242 | 65 3034    | 4 4931     | 3 2877     | 2 6459         | 7 0079         | .3758 |
| .6243 | 67 9389    | 4 1764     | 3 0312     | 1 8468         | 7 4134         | .3757 |
| .6244 | 70 5746    | 3 8595     | 2 7744     | 1 0476         | 7 8187         | .3756 |
| .6245 | 73 2105    | 3 5423     | 2 5174     | .7810 2481     | 8 2239         | .3755 |
| .6246 | 75 8467    | 3 2249     | 2 2602     | .7809 4484     | 8 6290         | .3754 |
| .6247 | 78 4831    | 2 9072     | 2 0028     | 8 6485         | 9 0340         | .3753 |
| .6248 | 81 1197    | 2 5892     | 1 7451     | 7 8484         | 9 4388         | .3752 |
| .6249 | 83 7565    | 2 2709     | 1 4873     | 7 0480         | .9269 8435     | .3751 |
| .6250 | .3186 3936 | .3791 9524 | .4841 2292 | .7806 2475     | .9270 2481     | .3750 |

e<sup>-1</sup>[= ε<sup>1</sup>[=.0000,0000+...000,0000+...000,000+...000,000+...000,000+...000,000+...000,000+...000,000+...000,000+...000,000+...000,000+...0

| P              | x                  | z                | √pq              | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q              |
|----------------|--------------------|------------------|------------------|----------------------|------------------|----------------|
| .6250          | .3186 3936         | .3791 9524       | .4841 2292       | .7806 2475           | .9270 2481       | .3750          |
| .6251          | 89 0309            | 1 6337           | 0 9709           | 5 4468               | 0 6526           | .3749          |
| .6252          | 91 6684            | 1 3146           | 0 7123           | 4 6458               | 1 0569           | .3748          |
| .6253          | 94 3061            | 0 9953           | 0 4536           | 3 8446               | 1 4611           | .3747          |
| .6254          | 96 9441            | 0 6758           | .4840 1946       | 3 0433               | 1 8652           | .3746          |
| .6255          | .3199 5822         | 0 3559           | .4839 9354       | 2 2417               | 2 2691           | .3745          |
| .6256          | .3202 2206         | .3790 0358       | 9 6760           | 1 4399               | 2 6730           | .3744          |
| .6257          | 04 8592            | .3789 7155       | 9 4164           | .7800 6379           | 3 0767           | .3743          |
| .6258          | 07 4981            | 9 3949           | 9 1565           | .7799 8356           | 3 4803           | .3742          |
| .6259          | 10 1371            | 9 0740           | 8 8965           | 9 0332               | 3 8837           | .3741          |
| .6260          | .3212 7764         | .3788 7528       | .4838 6362       | .7798 2306           | .9274 2870       | .3740          |
| .6261          | 15 4159            | 8 4314           | 8 3757           | 7 4277               | 4 6902           | .3739          |
| .6262          | 18 0556            | 8 1098           | 8 1149           | 6 6247               | 5 0933           | .3738          |
| .6263          | 20 6956            | 7 7878           | 7 8540           | 5 8214               | 5 4963           | .3737          |
| .6264          | 23 3357            | 7 4656           | 7 5928           | 5 0179               | 5 8991           | .3736          |
| .6265          | 25 9761<br>28 6168 | 7 1432           | 7 3314           | 4 2142               | 6 3018           | .3735          |
| .6266          | 28 6168            | 6 8204           | 7 0698           | 3 4103               | 6 7044           | .3734          |
| .6267          | 31 2576            | 6 4974           | 6 8079           | 2 6062               | 7 1068           | . 3733         |
| .6268          | 33 8987            | 6 1742           | 6 5459           | 1 8018               | 7 5091           | .3732          |
| .6269          | 36 5400            | 5 8506           | 6 2836           | 0 9973               | 7 9113           | .3731          |
| .6270          | .3239 1815         | .3785 5269       | .4836 0211       | .7790 1926           | .9278 3134       | .3730          |
| .6271          | 41 8233            | 5 2028           | 5 7584           | .7789 3876           | 8 7154           | .3729          |
| .6272          | 44 4653            | 4 8785           | 5 4954           | 8 5824               | 9 1172           | .3728          |
| .6273          | 47 1075            | 4 5539           | 5 2323           | 7 7770               | 9 5189           | .3727          |
| .6274          | 49 7499            | 4 2291           | 4 9689           | 6 9714               | .9279 9205       | .3726          |
| .6275<br>.6276 | 52 3926<br>55 0355 | 3 9040<br>3 5786 | 4 7053<br>4 4414 | 6 1656<br>5 3596     | .9280 3219       | .3725          |
|                |                    |                  |                  |                      | 0 7232           | .3724          |
| .6277          | 57 6786            | 3 2530           | 4 1774           | 4 5534               | 1 1244           | .3723          |
| .6278<br>.6279 | 60 3219<br>62 9655 | 2 9271<br>2 6009 | 3 9131<br>3 6486 | 3 7469<br>2 9403     | 1 5255<br>1 9265 | .3722<br>.3721 |
| .6280          | .3265 6093         | .3782 2745       | .4833 3839       | .7782 1334           | .9282 3273       |                |
|                |                    |                  |                  |                      |                  | .3720          |
| .6281          | 68 2533            | 1 9478           | 3 1190           | 1 3263<br>.7780 5190 | 2 7280           | .3719          |
| .6282<br>.6283 | 70 8976<br>73 5420 | 1 6208<br>1 2936 | 2 8538<br>2 5884 | .7779 7115           | 3 1286<br>3 5290 | .3718<br>.3717 |
|                |                    |                  | ł                |                      |                  |                |
| .6284          | 76 1867            | 0 9661<br>0 6384 | 2 3228<br>2 0570 | 8 9038<br>8 0958     | 3 9293<br>4 3295 | .3716<br>.3715 |
| .6285<br>.6286 | 78 8317<br>81 4768 | .3780 3103       | 1 7910           | 7 2877               | 4 7296           | .3714          |
| .6287          | 84 1222            | .3779 9821       | 1 5247           | 6 4793               | 5 1296           | .3713          |
| .6288          | 86 7679            | 9 6535           | 1 2582           | 5 6708               | 5 5294           | .3712          |
| .6289          | 89 4137            | 9 3247           | 0 9915           | 4 8620               | 5 9291           | .3711          |
| .6290          | .3292 0598         | .3778 9956       | .4830 7246       | .7774 0530           | .9286 3287       | .3710          |
| .6291          | 94 7061            | 8 6663           | 0 4574           | 3 2438               | 6 7281           | .3709          |
| .6292          | 97 3527            | 8 3367           | .4830 1901       | 2 4344               | 7 1274           | .3708          |
| .6293          | .3299 9995         | 8 0068           | .4829 9225       | 1 6247               | 7 5266           | .3707          |
| .6294          | .3302 6465         | 7 6767           | 9 6546           | 0 8149               | 7 9257           | .3706          |
| .6295          | 05 2938            | 7 3463           | 9 3866           | .7770 0048           | 8 3247           | .3705          |
| .6296          | 07 9412            | 7 0156           | 9 1183           | .7769 1946           | 8 7235           | .3704          |
| .6297          | 10 5889            | 6 6847           | 8 8499           | 8 3841               | 9 1222           | .3703          |
| .6298          | 13 2369            | 6 3535           | 8 5812           | 7 5734               | 9 5208           | .3702          |
| .6299          | 15 8851            | 6 0221           | 8 3122           | 6 7625               | .9289 9192       | .3701          |
| .6300          | .3318 5335         | .3775 6903       | .4828 0431       | .7765 9513           | .9290 3175       | .3700          |

.6300 .3700

| P              | x                  | z                    | √pq              | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q              |
|----------------|--------------------|----------------------|------------------|----------------------|------------------|----------------|
| .6300          | .3318 5335         | .3775 6903           | .4828 0431       | .7765 9513           | .9290 3175       | .3700          |
| .6301          | 21 1821            | 5 3584               | 7 7737           | 5 1400               | 0 7157           | .3699          |
| .6302          | 23 8310            | 5 0261               | 7 5041           | 4 3284               | 1 1138           | .3698          |
| .6303          | 26 4801            | 4 6936               | 7 2343           | 3 5167               | 1 5118           | .3697          |
| .6304          | 29 1295            | 4 3608               | 6 9643           | 2 7047               | 1 9096           | .3696          |
| .6305          | 31 7790            | 4 0278               | 6 6940           | 1 8925               | 2 3073           | .3695          |
| .6306          | 34 4288            | 3 6945               | 6 4235           | 1 0801               | 2 7049           | .3694          |
| .6307          | 37 0789            | 3 3609               | 6 1528           | .7760 2675           | 3 1023           | .3693          |
| .6308          | 39 7292            | 3 0270               | 5 8819           | .7759 4546           | 3 4997           | .3692          |
| .6309          | 42 3797            | 2 6929               | 5 6107           | 8 6416               | 3 8969           | .3691          |
| .6310          | .3345 0304         | .3772 3586           | .4825 3394       | .7757 8283           | .9294 2939       | .3690          |
| .6311          | 47 6814            | 2 0239               | 5 0678           | 7 0148               | 4 6909           | .3689          |
| .6312          | 50 3326            | 1 6890               | 4 7960           | 6 2011               | 5 0877           | .3688          |
| .6313          | 52 9840            | 1 3539               | 4 5239           | 5 3872               | 5 4844           | .3687          |
| .6314          | 55 6357            | 1 0184               | 4 2517           | 4 5731               | 5 8810           | .3686          |
| .6315<br>.6316 | 58 2876<br>60 9398 | 0 6827<br>0 3468     | 3 9792<br>3 7065 | 3 7588<br>2 9442     | 6 2775<br>6 6738 | .3685          |
|                |                    |                      |                  |                      |                  | .3684          |
| .6317          | 63 5922            | .3770 0105           | 3 4335           | 2 1294               | 7 0700           | .3683          |
| .6318<br>.6319 | 66 2448<br>68 8977 | .3769 6741<br>9 3373 | 3 1604<br>2 8870 | 1 3145<br>.7750 4993 | 7 4661<br>7 8621 | .3682<br>.3681 |
| .6320          | .3371 5508         | .3769 0003           | .4822 6134       | .7749 6839           | .9298 2579       | .3680          |
|                |                    |                      |                  |                      |                  |                |
| .6321<br>.6322 | 74 2041<br>76 8577 | 8 6630<br>8 3254     | 2 3396<br>2 0655 | 8 8682<br>8 0524     | 8 6536<br>9 0492 | .3679<br>.3678 |
| .6323          | 79 5115            | 7 9876               | 1 7913           | 7 2363               | 9 4447           | .3677          |
| .6324          | 82 1656            | 7 6495               | 1 5168           | 6 4201               | .9299 8400       | .3676          |
| .6325          | 84 8199            | 7 3112               | 1 2421           | 5 6036               | .9300 2352       | .3675          |
| .6326          | 87 4744            | 6 9726               | 0 9671           | 4 7869               | 0 6303           | .3674          |
| .6327          | 90 1292            | 6 6337               | 0 6920           | 3 9700               | 1 0253           | .3673          |
| .6328          | 92 7842            | 6 2945               | 0 4166           | 3 1528               | 1 4201           | .3672          |
| .6329          | 95 4394            | 5 9551               | .4820 1410       | 2 3355               | 1 8148           | .3671          |
| .6330          | .3398 0949         | .3765 6155           | .4819 8651       | .7741 5179           | .9302 2094       | .3670          |
| .6331          | .3400 7506         | 5 2755               | 9 5891           | .7740 7002           | 2 6039           | .3669          |
| .6332          | 03 4066            | 4 9353               | 9 3128           | .7739 8822           | 2 9982           | .3668          |
| .6333          | 06 0628            | 4 5948               | 9 0363           | 9 0640               | 3 3924           | .3667          |
| .6334          | 08 7192            | 4 2541               | 8 7596           | 8 2455               | 3 7865           | .3666          |
| .6335          | 11 3759            | 3 9131               | 8 4826           | 7 4269               | 4 1805           | .3665          |
| .6336          | 14 0329            | 3 5718               | 8 2055           | 6 6080               | 4 5744           | .3664          |
| .6337          | 16 6901            | 3 2303               | 7 9281           | 5 7890               | 4 9681           | .3663          |
| .6338          | 19 3475<br>22 0051 | 2 8885               | 7 6505           | 4 9697<br>4 1502     | 5 3617<br>5 7552 | .3662<br>.3661 |
|                |                    | 2 5464               | 7 3726           |                      |                  |                |
| .6340          | .3424 6630         | .3762 2041           | .4817 0946       | .7733 3305           | .9306 1485       | .3660          |
| .6341<br>.6342 | 27 3211<br>29 9795 | 1 8615               | 6 8163           | 2 5105<br>1 6904     | 6 5417<br>6 9348 | .3659<br>.3658 |
| .6343          | 32 6381            | 1 5186<br>1 1755     | 6 5378<br>6 2590 | 0 8700               | 7 3278           | .3657          |
| .6344          | 35 2970            | 0 8321               | 5 9801           | .7730 0494           | 7 7207           | .3656          |
| .6345          | 37 9561            | 0 4884               | 5 7009           | .7729 2286           | 8 1134           | .3655          |
| .6346          | 40 6155            | .3760 1445           | 5 4215           | 8 4076               | 8 5060           | .3654          |
| .6347          | 43 2751            | .3759 8003           | 5 1418           | 7 5864               | 8 8985           | .3653          |
| .6348          | 45 9349            | 9 4558               | 4 8620           | 6 7649               | 9 2908           | .3652          |
| .6349          | 48 5950            | 9 1111               | 4 5819           | 5 9432               | .9309 6831       | .3651          |
| .6350          | .3451 2553         | .3758 7661           | .4814 3016       | .7725 1214           | .9310 0752       | .3650          |

 $E^{-1}$   $\subseteq$   $E^{1}$   $\subseteq$  .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.6350 .3650

| P              | x                        | z                        | √pq              | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$           | q              |
|----------------|--------------------------|--------------------------|------------------|--------------------------|--------------------------|----------------|
| .6350          | .3451 2553               | .3758 7661               | .4814 3016       | .7725 1214               | .9310 0752               | .3650          |
| .6351          | 53 9159                  | 8 4209                   | 4 0211           | 4 2993                   | 0 4672                   | .3649          |
| .6352          | 56 5767                  | 8 0753                   | 3 7403           | 3 4769                   | 0 8590                   | .3648          |
| .6353          | 59 2377                  | 7 7295                   | 3 4594           | 2 6544                   | 1 2508                   | .3647          |
| .6354<br>.6355 | 61 8990<br>64 5606       | 7 3835<br>7 0372         | 3 1782<br>2 8967 | 1 8316<br>1 0087         | 1 6424<br>2 0339         | .3646          |
| .6356          | 67 2224                  | 6 6906                   | 2 6151           | .7720 1855               | 2 4252                   | .3645<br>.3644 |
| .6357          | 69 8844                  | 6 3437                   | 2 3332           | .7719 3621               | 2 8165                   | .3643          |
| .6358          | 72 5467                  | 5 9966                   | 2 0511           | 8 5385                   | 3 2076                   | .3642          |
| .6359          | 75 2092                  | 5 6492                   | 1 7688           | 7 7146                   | 3 5986                   | .3641          |
| .6360          | .3477 8720               | .3755 3016               | .4811 4863       | .7716 8906               | .9313 9895               | .3640          |
| .6361          | 80 5350                  | 4 9536                   | 1 2035           | 6 0663                   | 4 3802                   | .3639          |
| .6362<br>.6363 | 83 1983<br>85 8618       | 4 6055<br>4 2570         | 0 9205<br>0 6373 | 5 2418<br>4 4171         | 4 7709<br>5 1614         | .3638<br>.3637 |
| .6364          | 88 5256                  | 3 9083                   | 0 3538           | 3 5922                   | 5 5517                   | .3636          |
| .6365          | 91 1896                  | 3 5593                   | .4810 0702       | 2 7670                   | 5 9420                   | .3635          |
| .6366          | 93 8539                  | 3 2100                   | .4809 7863       | 1 9416                   | 6 3321                   | .3634          |
| .6367          | 96 5184                  | 2 8605                   | 9 5022           | 1 1161                   | 6 7221                   | .3633          |
| .6368<br>.6369 | .3499 1831<br>.3501 8481 | 2 5107<br>2 1607         | 9 2178<br>8 9332 | .7710 2903<br>.7709 4642 | 7 1120<br>7 5018         | .3632<br>.3631 |
| .6370          | .3504 5134               | .3751 8104               | .4808 6485       | .7708 6380               | .9317 8914               | .3630          |
| .6371          | 07 1789                  | 1 4598                   | 8 3634           | 7 8116                   | 8 2809                   | .3629          |
| .6372          | 09 8447                  | 1 1089                   | 8 0782           | 6 9849                   | 8 6703                   | .3628          |
| .6373          | 12 5107                  | 0 7578                   | 7 7927           | 6 1580                   | 9 0596                   | .3627          |
| .6374          | 15 1769                  | 0 4064                   | 7 5070           | 5 3309                   | 9 4487                   | .3626          |
| .6375<br>.6376 | 17 8434<br>20 5102       | .3750 0548<br>.3749 7029 | 7 2211<br>6 9350 | 4 5036<br>3 6760         | .9319 8377<br>.9320 2266 | .3625<br>.3624 |
| .6377          | 23 1772                  | 9 3507                   | 6 6486           | 2 8482                   | 0 6154                   | .3623          |
| .6378          | 25 8444                  | 8 9982                   | 6 3620           | 2 0203                   | 1 0040                   | .3622          |
| .6379          | 28 5119                  | 8 6455                   | 6 0752           | 1 1921                   | 1 3925                   | .3621          |
| .6380          | .3531 1797               | .3748 2925               | .4805 7882       | .7700 3636               | .9321 7809               | .3620          |
| .6381          | 33 8477                  | 7 9393                   | 5 5009           | .7699 5350               | 2 1692                   | .3619          |
| .6382<br>.6383 | 36 5160<br>39 1845       | 7 5858<br>7 2320         | 5 2134<br>4 9257 | 8 7061<br>7 8770         | 2 5574<br>2 9454         | .3618<br>.3617 |
| .6384          | 41 8532                  | 6 8779                   | 4 6378           | 7 0477                   | 3 3333                   | .3616          |
| .6385          | 44 5222                  | 6 5236                   | 4 3496           | 6 2182                   | 3 7211                   | .3615          |
| .6386          | 47 1915                  | 6 1690                   | 4 0612           | 5 3885                   | 4 1088                   | .3614          |
| .6387          | 49 8610                  | 5 8142                   | 3 7726           | 4 5585                   | 4 4963                   | .3613          |
| .6388          | 52 5308<br>55 2008       | 5 4590<br>5 1037         | 3 4837<br>3 1947 | 3 7284<br>2 8980         | 4 8837<br>5 2710         | .3612<br>.3611 |
| .6390          | .3557 8711               | .3744 7480               | .4802 9054       | .7692 0673               | .9325 6582               | .3610          |
| .6391          | 60 5416                  | 4 3921                   | 2 6158           | 1 2365                   | 6 0452                   | .3609          |
| .6392          | 63 2124                  | 4 0359                   | 2 3261           | .7690 4055               | 6 4321                   | .3608          |
| .6393          | 65 8835                  | 3 6794                   | 2 0361           | .7689 5742               | 6 8189                   | .3607          |
| .6394          | 68 5548                  | 3 3227                   | 1 7459           | 8 7427                   | 7 2056                   | .3606          |
| .6395          | 71 2263<br>73 8981       | 2 9657<br>2 6085         | 1 4555<br>1 1649 | 7 9110<br>7 0790         | 7 5921<br>7 9786         | .3605<br>.3604 |
| .6397          | <b>76</b> 5702           | 2 2509                   | 0 8740           | 6 2469                   | 8 3649                   | .3603          |
| .6398          | 79 2425                  | 1 8932                   | 0 5829           | 5 4145                   | 8 7510                   | .3602          |
| .6399          | 81 9151                  | 1 5351                   | 0 2916           | 4 5819                   | 9 1371                   | .3601          |
| .6400          | .3584 5879               | .3741 1768               | .4800 0000       | .7683 7491               | .9329 5230               | .3600          |

 $E^{-i}i_{\pm}$   $E^{i}i_{\pm}.0000,0000+..0000,0000+..0000+..0000,0000+..0000,0000+..0000,0000+..000+..000+$ 

TABLE I

.6400 .3600

| .0400          |                          |                  |                      |                      | ,                | .3000          |
|----------------|--------------------------|------------------|----------------------|----------------------|------------------|----------------|
| P              | x                        | z                | √pq                  | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q              |
| .6400          | .3584 5879               | .3741 1768       | .4800 0000           | .7683 7491           | .9329 5230       | .3600          |
| .6401          | 87 2610                  | 0 8182           | .4799 7082           | 2 9160               | .9329 9088       | .3599          |
| .6402          | 89 9343                  | 0 4593           | 9 4162               | 2 0828               | .9330 2945       | .3598          |
| .6403          | 92 6079                  | .3740 1002       | 9 1240               | 1 2493               | 0 6801           | .3597          |
| .6404          | 95 2818                  | .3739 7408       | 8 8315               | .7680 4156           | 1 0655           | .3596          |
| .6405<br>.6406 | .3597 9559<br>.3600 6302 | 9 3811<br>9 0212 | 8 5388<br>8 2459     | .7679 5817<br>8 7476 | 1 4509<br>1 8360 | .3595<br>.3594 |
| .6407          |                          | l                |                      |                      | 2 2211           | .3593          |
| .6408          | 03 3049<br>05 9798       | 8 6610<br>8 3005 | 7 9528<br>7 6594     | 7 9132<br>7 0786     | 2 6061           | .3592          |
| .6409          | 08 6549                  | 7 9398           | 7 3658               | 6 2438               | 2 9909           | .3591          |
| .6410          | .3611 3303               | .3737 5788       | .4797 0720           | .7675 4088           | .9333 3756       | .3590          |
| .6411          | 14 0060                  | 7 2175           | 6 7780               | 4 5735               | 3 7602           | .3589          |
| .6412          | 16 6819                  | 6 8560           | 6 4837               | 3 7381               | 4 1446           | .3588          |
| .6413          | 19 3581                  | 6 4942           | 6 1892               | 2 9024               | 4 5290           | .3587          |
| .6414          | 22 0345                  | 6 1321           | 5 8945               | 2 0665               | 4 9132           | .3586          |
| .6415<br>.6416 | 24 7112<br>27 3882       | 5 7698<br>5 4072 | 5 5995<br>5 3044     | 1 2303<br>.7670 3940 | 5 2973<br>5 6812 | .3585<br>.3584 |
| .6417          | 30 0654                  | 5 0443           | 5 0090               | .7669 5574           | 6 0651           | .3583          |
| .6418          | 32 7429                  | 4 6812           | 4 7133               | 8 7206               | 6 4488           | .3582          |
| .6419          | 35 4206                  | 4 3178           | 4 4175               | 7 8836               | 6 8324           | .3581          |
| .6420          | .3638 0986               | .3733 9541       | .4794 1214           | .7667 0464           | .9337 2159       | .3580          |
| .6421          | 40 7769                  | 3 5902           | 3 8251               | 6 2089               | 7 5992           | .3579          |
| .6422          | 43 4554                  | 3 2259           | 3 5286               | 5 3712               | 7 9824           | .3578          |
| .6423          | 46 1341                  | 2 8615           | 3 2318               | 4 5333               | 8 3655           | .3577          |
| .6424<br>.6425 | 48 8132<br>51 4925       | 2 4967<br>2 1317 | 2 9348<br>2 6376     | 3 6952<br>2 8568     | 8 7485<br>9 1314 | .3576<br>.3575 |
| .6426          | 54 1721                  | 1 7664           | 2 3401               | 2 0183               | 9 5141           | .3574          |
| .6427          | 56 8519                  | 1 4009           | 2 0425               | 1 1795               | .9339 8967       | .3573          |
| .6428          | 59 5319                  | 1 0351           | 1 7446               | .7660 3405           | .9340 2792       | .3572          |
| .6429          | 62 2123                  | 0 6690           | 1 4464               | .7659 5012           | 0 6616           | .3571          |
| .6430          | .3664 8929               | .3730 3026       | .4791 1481           | .7658 6618           | .9341 0438       | .3570          |
| .6431          | 67 5738                  | .3729 9360       | 0 8495               | 7 8221               | 1 4260           | .3569          |
| .6432          | 70 2549<br>72 9363       | 9 5691<br>9 2019 | 0 5507<br>.4790 2517 | 6 9822<br>6 1420     | 1 8080<br>2 1898 | .3568<br>.3567 |
| 1              | 75 6180                  | ĺ                | }                    | 5 3017               |                  | .3566          |
| .6434          | 78 2999                  | 8 8345<br>8 4668 | .4789 9524<br>9 6529 | 4 4611               | 2 5716<br>2 9532 | .3565          |
| .6436          | 80 9821                  | 8 0988           | 9 3532               | 3 6203               | 3 3347           | .3564          |
| .6437          | 83 6646                  | 7 7306           | 9 0532               | 2 7793               | 3 7161           | .3563          |
| .6438          | 86 3473                  | 7 3621           | 8 7531               | 1 9381               | 4 0974           | .3562          |
| .6439          | 89 0303                  | 6 9933           | 8 4527               | 1 0966               | 4 4785           | .3561          |
| .6440          | .3691 7136               | .3726 6243       | .4788 1520           | .7650 2549           | .9344 8595       | .3560          |
| .6441          | 94 3971<br>97 0809       | 6 2550<br>5 8854 | 7 8512<br>7 5501     | .7649 4130<br>8 5708 | 5 2404<br>5 6212 | .3559<br>.3558 |
| .6443          | .3699 7650               | 5 5156           | 7 2488               | 7 7285               | 6 0019           | .3557          |
| .6444          | .3702 4493               | 5 1455           | 6 9473               | 6 8859               | 6 3824           | .3556          |
| .6445          | 05 1339                  | 4 7751           | 6 6455               | 6 0431               | 6 7628           | .3555          |
| .6446          | 07 8188                  | 4 4044           | 6 3435               | 5 2001               | 7 1431           | .3554          |
| .6447          | 10 5039<br>13 1893       | 4 0335           | 6 0413<br>5 7388     | 4 3568<br>3 5133     | 7 5233<br>7 9033 | .3553          |
| .6449          | 15 8750                  | 3 6623<br>3 2909 | 5 4361               | 2 6696               | 8 2832           | .3551          |
| .6450          | .3718 5609               | .3722 9192       | .4785 1332           | .7641 8257           | .9348 6630       | .3550          |
| -11            | 11 .3710 3009            |                  | 1 17705 1336         | 1 OZJI               | 1 .7270 0000     |                |

 $E^{-1}i_{-}$   $E^{1}i_{-}.0000,0000+$  .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.6450 .3550

| .0430          |                    | 1                        | · ·                  | 1                        | 1.5                  | .3550          |
|----------------|--------------------|--------------------------|----------------------|--------------------------|----------------------|----------------|
| P              | x                  | Z                        | <b>1</b> pq          | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q              |
| .6450          | .3718 5609         | .3722 9192               | .4785 1332           | .7641 8257               | .9348 6630           | .3550          |
| .6451          | 21 2471            | 2 5472                   | 4 8301               | 0 9815                   | 9 0427               | .3549          |
| .6452<br>.6453 | 23 9336<br>26 6203 | 2 1749<br>1 8024         | 4 5267<br>4 2231     | .7640 1372<br>.7639 2926 | 9 4222<br>.9349 8017 | .3548<br>.3547 |
| .6454          | 29 3073            | 1 4296                   | 3 9193               | 8 4477                   | .9350 1810           | .3546          |
| .6455          | 31 9946            | 1 0565                   | 3 6153               | 7 6027                   | 0 5601               | .3545          |
| .6456          | 34 6821            | 0 6832                   | 3 3110               | 6 7574                   | 0 9392               | .3544          |
| .6457          | 37 3699            | .3720 3096               | 3 0065               | 5 9119                   | 1 3181               | .3543          |
| .6458<br>.6459 | 40 0580<br>42 7464 | .3719 9357<br>9 5616     | 2 7017<br>2 3968     | 5 0662<br>4 2203         | 1 6970<br>2 0757     | .3542<br>.3541 |
| .6460          | .3745 4350         | .3719 1872               | .4782 0916           | .7633 3741               | .9352 4542           | .3540          |
| .6461          | 48 1239            | 8 8125                   | 1 7862               | 2 5277                   | 2 8327               | .3539          |
| .6462          | 50 8131            | 8 4376                   | 1 4805               | 1 6811                   | 3 2110               | .3538          |
| .6463          | 53 5025            | 8 0623                   | 1 1746               | .7630 8342               | 3 5892               | .3537          |
| .6464          | 56 1922            | 7 6869                   | 0 8685               | .7629 9872               | 3 9673               | .3536          |
| .6465<br>.6466 | 58 8822<br>61 5725 | 7 3111<br>6 9351         | 0 5622<br>.4780 2556 | 9 1399<br>8 2923         | 4 3452<br>4 7231     | .3535          |
| .6467          | 64 2630            | 6 5588                   | .4779 9488           | 7 4446                   | 5 1008               | .3533          |
| .6468          | 66 9538            | 6 1822                   | 9 6418               | 6 5966                   | 5 4784               | .3532          |
| .6469          | 69 6449            | 5 8054                   | 9 3346               | 5 7484                   | 5 8559               | .3531          |
| .6470          | .3772 3362         | .3715 4283               | .4779 0271           | .7624 9000               | .9356 2332           | .3530          |
| .6471          | 75 0278            | 5 0509                   | 8 7194               | 4 0514                   | 6 6104               | .3529          |
| .6472<br>.6473 | 77 7197<br>80 4119 | 4 6733<br>4 2954         | 8 4115<br>8 1033     | 3 2025<br>2 3534         | 6 9875<br>7 3645     | .3528<br>.3527 |
| .6474          | 83 1043            | 3 9172                   | 7 7949               | 1 5041                   | 7 7414               | .3526          |
| .6475          | 85 7970            | 3 5388                   | 7 4863               | .7620 6545               | 8 1181               | .3525          |
| .6476          | 88 4900            | 3 1600                   | 7 1774               | .7619 8047               | 8 4948               | .3524          |
| .6477          | 91 1833            | 2 7811                   | 6 8683               | 8 9547                   | 8 8712               | .3523          |
| .6478<br>.6479 | 93 8768<br>96 5706 | 2 4018<br>2 0223         | 6 5590<br>6 2495     | 8 1045<br>7 2540         | 9 2476               | .3522<br>.3521 |
| .6480          | .3799 2647         | .3711 6425               | .4775 9397           | .7616 4034               | .9360 0000           | .3520          |
| .6481          | .3801 9591         | 1 2624                   | 5 6297               | 5 5524                   | 0 3760               | .3519          |
| .6482          | 04 6537            | 0 8821                   | 5 3195               | 4 7013                   | 0 7519               | .3518          |
| .6483          | 07 3486            | 0 5015                   | 5 0090               | 3 8499                   | 1 1277               | .3517          |
| .6484<br>.6485 | 10 0438<br>12 7393 | .3710 1206<br>.3709 7395 | 4 6983<br>4 3874     | 2 9984<br>2 1465         | 1 5033<br>1 8788     | .3516<br>.3515 |
| .6486          | 15 4350            | 9 3581                   | 4 0762               | 1 2945                   | 2 2542               | .3514          |
| . 6487         | 18 1311            | 8 9764                   | 3 7649               | .7610 4422               | 2 6295               | .3513          |
| .6488<br>.6489 | 20 8274<br>23 5239 | 8 5945<br>8 2122         | 3 4533<br>3 1414     | .7609 5897<br>8 7370     | 3 0046<br>3 3797     | .3512<br>.3511 |
| .6490          | .3826 2208         | .3707 8298               | .4772 8293           | .7607 8841               | .9363 7546           | .3510          |
|                |                    |                          |                      |                          |                      |                |
| .6491<br>.6492 | 28 9179<br>31 6153 | 7 4470<br>7 0640         | 2 5171<br>2 2045     | 7 0309<br>6 1775         | 4 1294<br>4 5040     | .3509<br>.3508 |
| .6493          | 34 3130            | 6 6807                   | 1 8918               | 5 3239                   | 4 8786               | .3507          |
| .6494          | 37 0110            | 6 2971                   | 1 5788               | 4 4700                   | 5 2530               | .3506          |
| .6495<br>.6496 | 39 7093<br>42 4078 | 5 9133<br>5 5292         | 1 2656<br>0 9521     | 3 6159<br>2 7616         | 5 6273<br>6 0015     | .3505<br>.3504 |
| .6497          | 45 1066            | 5 1448                   | 0 6384               | 1 9071                   | 6 3756               | .3503          |
| .6498          | 47 8057            | 4 7601                   | 0 3245               | 1 0523                   | 6 7495               | .3502          |
| .6499          | 50 5051            | 4 3752                   | .4770 0104           | .7600 1973               | 7 1233               | .3501          |
| .6500          | .3853 2047         | .3703 9900               | .4769 6960           | .7599 3421               | .9367 4970           | .3500          |
| -11            |                    |                          |                      |                          |                      |                |

 $E^{-1}I = E^{1}I = 0000,0000 + .0000,0000$ 

.6500 .3500

| P              | x                  | z                    | √pq              | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$   | q              |
|----------------|--------------------|----------------------|------------------|--------------------------|------------------|----------------|
| .6500          | .3853 2047         | .3703 9900           | .4769 6960       | .7599 3421               | .9367 4970       | .3500          |
| .6501          | 55 9046            | 3 6046               | 9 3814           | 8 4866                   | 7 8706           | .3499          |
| .6502          | 58 6048            | 3 2189               | 9 0666           | 7 6309                   | 8 2440           | .3498          |
| .6503          | 61 3053            | 2 8329               | 8 7515           | 6 7750                   | 8 6173           | .3497          |
| .6504          | 64 0061            | 2 4466               | 8 4362           | 5 9189                   | 8 9906           | .3496          |
| .6505          | 66 7072            | 2 0601               | 8 1207           | 5 0625                   | 9 3636           | .3495          |
| .6506          | 69 4085            | 1 6733               | 7 8049           | 4 2059                   | .9369 7366       | .3494          |
| .6507          | 72 1101            | 1 2862               | 7 4890           | 3 3491                   | .9370 1094       | .3493          |
| .6508<br>.6509 | 74 8120<br>77 5142 | 0 8988<br>0 5112     | 7 1727<br>6 8563 | 2 4921<br>1 6348         | 0 4822<br>0 8548 | .3492<br>.3491 |
| .6510          | .3880 2167         | .3700 1233           | .4766 5396       | .7590 7773               | .9371 2272       | .3490          |
|                |                    |                      |                  |                          |                  |                |
| .6511<br>.6512 | 82 9195<br>85 6225 | .3699 7352<br>9 3468 | 6 2227<br>5 9056 | .7589 9196<br>9 0616     | 1 5996<br>1 9718 | .3489<br>.3488 |
| .6513          | 88 3258            | 8 9581               | 5 5882           | 8 2034                   | 2 3439           | .3487          |
| .6514          | 91 0294            | 8 5691               | 5 2706           | 7 3450                   | 2 7159           | .3486          |
| .6515          | 93 7333            | 8 1798               | 4 9528           | 6 4863                   | 3 0878           | .3485          |
| .6516          | 96 4375            | 7 7903               | 4 6347           | 5 6275                   | 3 4596           | .3484          |
| .6517          | .3899 1419         | 7 4006               | 4 3164           | 4 7684                   | 3 8312           | .3483          |
| .6518          | .3901 8467         | 7 0105               | 3 9979           | 3 9090                   | 4 2027           | .3482          |
| .6519          | 04 5517            | 6 6202               | 3 6791           | 3 0495                   | 4 5741           | .3481          |
| .6520          | .3907 2570         | .3696 2296           | .4763 3602       | .7582 1897               | .9374 9453       | .3480          |
| .6521          | 09 9626            | 5 8387               | 3 0409           | 1 3296                   | 5 3165           | .3479          |
| .6522          | 12 6685            | 5 4476               | 2 7215           | .7580 4694               | 5 6875<br>6 0584 | .3478          |
| .6523          | 15 3747            | 5 0562               | 2 4018           | .7579 6089               | į į              | .3477          |
| .6524          | 18 0811            | 4 6645               | 2 0819           | 8 7482<br>7 8872         | 6 4292<br>6 7998 | .3476<br>.3475 |
| .6525<br>.6526 | 20 7879<br>23 4949 | 4 2726<br>3 8804     | 1 7618<br>1 4414 | 7 0261                   | 7 1704           | .3474          |
| .6527          | 26 2022            | 3 4879               | 1 1208           | 6 1647                   | 7 5408           | .3473          |
| .6528          | 28 9098            | 3 0951               | 0 7999           | 5 3030                   | 7 9111           | .3472          |
| .6529          | 31 6177            | 2 7021               | 0 4789           | 4 4412                   | 8 2812           | .3471          |
| .6530          | .3934 3259         | .3692 3088           | .4760 1576       | .7573 5791               | .9378 6513       | .3470          |
| .6531          | 37 0344            | 1 9152               | .4759 8360       | 2 7168                   | 9 0212           | .3469          |
| .6532          | 39 7431            | 1 5214               | 9 5143           | 1 8542                   | 9 3910           | .3468          |
| .6533          | 42 4522            | 1 1273               | 9 1923           | 0 9914                   | .9379 7607       | .3467          |
| .6534          | 45 1615            | 0 7329               | 8 8700           | .7570 1284               | .9380 1303       | .3466          |
| .6535          | 47 8712<br>50 5811 | .3690 3383           | 8 5476           | .7569 2652<br>8 4017     | 0 4997<br>0 8690 | .3465<br>.3464 |
| .6536          |                    | .3689 9433           | 8 2249           |                          |                  |                |
| .6537          | 53 2913            | 9 5481               | 7 9020<br>7 5788 | 7 5380<br>6 6740         | 1 2382<br>1 6073 | .3463<br>.3462 |
| .6538<br>.6539 | 56 0018<br>58 7126 | 9 1527<br>8 7569     | 7 2554           | 5 8099                   | 1 9763           | .3461          |
| .6540          | .3961 4237         | .3688 3609           | .4756 9318       | .7564 9455               | .9382 3451       | .3460          |
| .6541          | 64 1351            | 7 9647               | 6 6079           | 4 0808                   | 2 7138           | .3459          |
| .6542          | 66 8468            | 7 5681               | 6 2838           | 3 2160                   | 3 0824           | .3458          |
| .6543          | 69 5587            | 7 1713               | 5 9595           | 2 3509                   | 3 4509           | .3457          |
| .6544          | 72 2710            | 6 7742               | 5 6350           | 1 4856                   | 3 8193           | .3456          |
| .6545<br>.6546 | 74 9835<br>77 6964 | 6 3768               | 5 3102<br>4 9852 | .7560 6200<br>.7559 7542 | 4 1875<br>4 5556 | .3455<br>.3454 |
| i i            |                    | 5 9792               | 1                | t                        | ł                |                |
| .6547          | 80 4095            | 5 5813               | 4 6599           | 8 8882                   | 4 9236           | .3453          |
| .6548<br>.6549 | 83 1230<br>85 8367 | 5 1831<br>4 7847     | 4 3344 4 0087    | 8 0220<br>7 1555         | 5 2915<br>5 6592 | .3452<br>.3451 |
| .6550          | .3988 5507         | .3684 3860           | .4753 6828       | .7556 2888               | .9386 0268       | .3450          |

E-IL EIL-0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| .0000          |                    | ·                |                      | 1 ,                  |                  | .3450          |
|----------------|--------------------|------------------|----------------------|----------------------|------------------|----------------|
| _ <b>p</b>     | x                  | z                | √pq                  | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q              |
| .6550          | .3988 5507         | .3684 3860       | .4753 6828           | .7556 2888           | .9386 0268       | .3450          |
| .6551          | 91 2650            | 3 9870           | 3 3566               | 5 4218               | 6 3944           | .3449          |
| .6552          | 93 9796            | 3 5877           | 3 0302               | 4 5547               | 6 7617           | .3448          |
| .6553          | 96 6945            | 3 1882           | 2 7035               | 3 6872               | 7 1290           | .3447          |
| .6554          | .3999 4097         | 2 7884           | 2 3767               | 2 8196               | 7 4962           | .3446          |
| .6555          | .4002 1252         | 2 3883           | 2 0496               | 1 9517               | 7 8632           | .3445          |
| .6556          | 04 8409            | 1 9879           | 1 7222               | 1 0836               | 8 2301           | .3444          |
| .6557          | 07 5570            | 1 5873           | 1 3946               | .7550 2153           | 8 5969           | .3443          |
| .6558<br>.6559 | 10 2734<br>12 9900 | 1 1864           | 1 0668               | .7549 3467           | 8 9635           | .3442          |
|                |                    | 0 7853           | 0 7388               | 8 4779               | 9 3301           | .3441          |
| .6560          | .4015 7070         | .3680 3838       | .4750 4105           | .7547 6089           | .9389 6965       | .3440          |
| .6561          | 18 4243            | .3679 9821       | .4750 0820           | 6 7396               | .9390 0628       | .3439          |
| .6562<br>.6563 | 21 1418<br>23 8596 | 9 5801<br>9 1779 | .4749 7533<br>9 4243 | 5 8701<br>5 0004     | 0 4290           | .3438          |
|                |                    |                  | 1                    |                      | 0 7950           | .3437          |
| .6564<br>.6565 | 26 5778<br>29 2962 | 8 7754<br>8 3726 | 9 0951<br>8 7656     | 4 1304<br>3 2602     | 1 1610           | .3436          |
| .6566          | 32 0150            | 7 9695           | 8 4360               | 2 3898               | 1 5268<br>1 8925 | .3435<br>.3434 |
| .6567          | 34 7340            | 7 5662           | 8 1060               | 1 5191               | 2 2580           | .3433          |
| .6568          | 37 4533            | 7 1626           | 7 7759               | .7540 6482           | 2 6235           | .3432          |
| .6569          | 40 1730            | 6 7587           | 7 4455               | .7539 7771           | 2 9888           | .3431          |
| .6570          | .4042 8929         | .3676 3545       | .4747 1149           | .7538 9058           | .9393 3540       | .3430          |
| .6571          | 45 6131            | 5 9501           | 6 7841               | 8 0342               | 3 7191           | .3429          |
| .6572          | 48 3337            | 5 5454           | 6 4530               | 7 1623               | 4 0841           | .3428          |
| .6573          | 51 0545            | 5 1404           | 6 1217               | 6 2903               | 4 4489           | .3427          |
| .6574          | 53 7757            | 4 7352           | 5 7901               | 5 4180               | 4 8137           | .3426          |
| .6575          | 56 4971            | 4 3297           | 5 4584               | 4 5454               | 5 1783           | .3425          |
| .6576          | 59 2188            | 3 9239           | 5 1263               | 3 6727               | 5 5428           | .3424          |
| .6577          | 61 9409            | 3 5178           | 4 7941               | 2 7997               | 5 9071           | .3423          |
| .6578<br>.6579 | 64 6632<br>67 3859 | 3 1115<br>2 7049 | 4 4616<br>4 1289     | 1 9264<br>1 0530     | 6 2714           | .3422          |
|                |                    |                  |                      |                      | 6 6355           | .3421          |
| .6580          | .4070 1088         | .3672 2980       | .4743 7959           | .7530 1793           | .9396 9995       | .3420          |
| .6581<br>.6582 | 72 8320<br>75 5556 | 1 8909<br>1 4835 | 3 4628<br>3 1293     | .7529 3053<br>8 4312 | 7 3634<br>7 7272 | .3419          |
| .6583          | 78 2794            | 1 0758           | 2 7957               | 7 5568               | 8 0908           | .3418<br>.3417 |
| .6584          | 81 0036            | 0 6678           | 2 4618               | 6 6821               | 8 4543           | .3416          |
| .6585          | 83 7280            | .3670 2596       | 2 1277               | 5 8073               | 8 8177           | .3415          |
| .6586          | 86 4528            | .3669 8511       | 1 7933               | 4 9322               | 9 1810           | .3414          |
| .6587          | 89 1778            | 9 4423           | 1 4587               | 4 0568               | 9 5442           | .3413          |
| .6588          | 91 9032            | 9 0332           | 1 1239               | 3 1812               | .9399 9072       | .3412          |
| .6589          | 94 6288            | 8 6239           | 0 7889               | 2 3054               | .9400 2702       | .3411          |
| .6590          | .4097 3548         | .3668 2143       | .4740 4536           | .7521 4294           | .9400 6330       | .3410          |
| .6591          | .4100 0811         | 7 8044           | .4740 1180           | .7520 5531           | 0 9956           | .3409          |
| .6592<br>.6593 | 02 8077<br>05 5345 | 7 3943<br>6 9839 | .4739 7823<br>9 4463 | .7519 6766<br>8 7998 | 1 3582<br>1 7206 | .3408<br>.3407 |
|                |                    | l .              |                      |                      |                  |                |
| .6594<br>.6595 | 08 2617<br>10 9892 | 6 5732<br>6 1622 | 9 1100<br>8 7736     | 7 9229<br>7 0456     | 2 0830<br>2 4452 | .3406<br>.3405 |
| .6596          | 13 7170            | 5 7510           | 8 4369               | 6 1682               | 2 8072           | .3404          |
| .6597          | 16 4451            | 5 3395           | 8 0999               | 5 2905               | 3 1692           | .3403          |
| .6598          | 19 1736            | 4 9277           | 7 7628               | 4 4126               | 3 5310           | .3402          |
| .6599          | 21 9023            | 4 5156           | 7 4254               | 3 5344               | 3 8928           | .3401          |
| .6600          | .4124 6313         | .3664 1033       | .4737 0877           | .7512 6560           | .9404 2544       | .3400          |
|                |                    |                  |                      |                      | <del></del>      |                |

 $E^{-1}_{1} = E^{1}_{2} = 0000,0000 + .0000000 + .0000,0000 + .0000,0000 + .0000,0000 + .0000,0000 + .0000,0$ 

| ſ              |                    | T                    | 1                    | 4 2                      | 4 7 3                | .3400                   |
|----------------|--------------------|----------------------|----------------------|--------------------------|----------------------|-------------------------|
| <u> </u>       | x                  | Z                    | <b>1</b> <i>pq</i>   | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q                       |
| .6600          | .4124 6313         | .3664 1033           | .4737 0877           | .7512 6560               | .9404 2544           | .3400                   |
| .6601          | 27 3606            | 3 6907               | 6 7498               | 1 7774                   | 4 6158               | .3399                   |
| .6602<br>.6603 | 30 0903<br>32 8202 | 3 2778<br>2 8647     | 6 4117<br>6 0734     | 0 8985<br>.7510 0194     | 4 9772<br>5 3384     | .3398                   |
| j j            |                    | 2 4513               | 5 7348               | .7509 1400               | 5 6995               | .3396                   |
| .6604<br>.6605 | 35 5505<br>38 2810 | 2 0376               | 5 3960               | 8 2605                   | 6 0605               | .3395                   |
| .6606          | 41 0119            | 1 6236               | 5 0569               | 7 3806                   | 6 4214               | .3394                   |
| .6607          | 43 7431            | 1 2094               | 4 7176               | 6 5006                   | 6 7822               | .3393                   |
| .6608          | 46 4746            | 0 7949               | 4 3781<br>4 0383     | 5 6203                   | 7 1428<br>7 5033     | .3392                   |
| .6609          | 49 2064            | .3660 3801           |                      | 4 7398                   |                      | .3391                   |
| .6610          | .4151 9385         | .3659 9650           | .4733 6983           | .7503 8590               | .9407 8637           | .3390                   |
| .6611<br>.6612 | 54 6709<br>57 4037 | 9 5497<br>9 1341     | 3 3581<br>3 0176     | 2 9780<br>2 0968         | 8 2240<br>8 5842     | .3389<br>.3388          |
| .6613          | 60 1367            | 8 7182               | 2 6769               | 1 2153                   | 8 9442               | .3387                   |
| .6614          | 62 8700            | 8 3021               | 2 3360               | .7500 3336               | 9 3041               | .3386                   |
| .6615          | 65 6037            | 7 8656               | 1 9948               | .7499 4516               | .9409 6639           | .3385                   |
| .6616          | 68 3377            | 7 4689               | 1 6534               | 8 5695                   | .9410 0236           | .3384                   |
| .6617          | 71 0720            | 7 0520               | 1 3118               | 7 6870                   | 0 3831               | .3383                   |
| .6618<br>.6619 | 73 8066<br>76 5415 | 6 6347<br>6 2172     | 0 9699<br>0 6278     | 6 8044<br>5 9215         | 0 7426<br>1 1019     | .3382<br>.3381          |
| .6620          | .4179 2767         | .3655 7994           | .4730 2854           | .7495 0384               | .9411 4611           | .3380                   |
| .6621          | 82 0122            | 5 3814               | .4729 9428           | 4 1550                   | 1 8202               | .3379                   |
| .6622          | 84 7481            | 4 9630               | 9 6000               | 3 2714                   | 2 1791               | .3378                   |
| .6623          | 87 4843            | 4 5444               | 9 2569               | 2 3875                   | 2 5380               | .3377                   |
| .6624          | 90 2207            | 4 1255               | 8 9136               | 1 5035                   | 2 8967               | .3376                   |
| .6625<br>.6626 | 92 9575<br>95 6946 | 3 7064<br>3 2869     | 8 5701<br>8 2263     | .7490 6191<br>.7489 7346 | 3 2553<br>3 6138     | .3375<br>.33 <b>7</b> 4 |
| .6627          | .4198 4321         | 2 8672               | 7 8823               | 8 8498                   | 3 9721               | .3373                   |
| .6628          | .4201 1698         | 2 4472               | 7 5380               | 7 9647                   | 4 3304               | .3372                   |
| .6629          | 03 9078            | 2 0270               | 7 1936               | 7 0795                   | 4 6885               | .3371                   |
| .6630          | .4206 6462         | .3651 6065           | .4726 8488           | .7486 1940               | .9415 0465           | .3370                   |
| .6631          | 09 3849            | 1 1857               | 6 5039               | 5 3082                   | 5 4043               | .3369                   |
| .6632<br>.6633 | 12 1239<br>14 8632 | 0 7646<br>.3650 3432 | 6 1587<br>5 8133     | 4 4222<br>3 5360         | 5 7621<br>6 1197     | .3368<br>.3367          |
| .6634          | 1                  | .3649 9216           | 5 4676               |                          |                      | .3366                   |
| .6635          | 17 6028<br>20 3427 | 9 4997               | 5 1217               | 2 6495<br>1 7628         | 6 4773<br>6 8347     | .3365                   |
| .6636          | 23 0830            | 9 0775               | 4 7755               | .7480 8759               | 7 1919               | .3364                   |
| .6637          | 25 8236            | 8 6551               | 4 4292               | .7479 9887               | 7 5491               | .3363                   |
| .6638<br>.6639 | 28 5645<br>31 3057 | 8 2324<br>7 8094     | 4 0826               | 9 1013                   | 7 9061<br>8 2631     | .3362                   |
| .6640          | 31 3057            | 7 8094<br>.3647 3861 | 3 7357<br>.4723 3886 | 8 2136<br>.7477 3257     | 8 2631<br>.9418 6199 | .3361                   |
| .6641          | 36 7891            | 6 9626               | 3 0413               | 6 4376                   | 8 9765               | .3359                   |
| .6642          | 39 5312            | 6 5388               | 2 6937               | 5 5492                   | 9 3331               | .3358                   |
| .6643          | 42 2737            | 6 1147               | 2 3459               | 4 6606                   | .9419 6895           | .3357                   |
| .6644          | 45 0165            | 5 6903               | 1 9979               | 3 7717                   | .9420 0459           | .3356                   |
| .6645<br>.6646 | 47 7597<br>50 5031 | 5 2657<br>4 8408     | 1 6496<br>1 3011     | 2 8826<br>1 9933         | 0 4021<br>0 7581     | .3355<br>.3354          |
| .6647          | 53 2469            | 4 4156               | 0 9523               | 1 1037                   | 1 1141               | .3353                   |
| .6648          | 55 9910            | 3 9901               | 0 6034               | .7470 2139               | 1 4699               | .3352                   |
| .6649          | 58 7354            | 3 5644               | .4720 2541           | .7469 3239               | 1 8257               | .3351                   |
| .6650          | .4261 4801         | .3643 1384           | .4719 9047           | .7468 4336               | .9422 1813           | .3350                   |

 $E^{-1}_{1} = E^{1}_{2} = .0000,0000+ .0000,000+ .00000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .00000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .00000+ .0000,000+ .0000,000+ .0000,000+ .000000+ .0000000+ .0000000+ .0000000+ .000000+ .000000+ .000000+ .000000+ .000000+ .000000+$ 

| p     | x              | z          | √pq        | $\sqrt{1-p^2}$    | $\sqrt{1-q^2}$   | q     |
|-------|----------------|------------|------------|-------------------|------------------|-------|
| .6650 | .4261 4801     | .3643 1384 | .4719 9047 | <b>.7468</b> 4336 | .9422 1813       | .3350 |
| .6651 | 64 2251        | 2 7121     | 9 5550     | 7 5430            | 2 5368           | .3349 |
| .6652 | 66 9705        | 2 2855     | 9 2050     | 6 6523            | 2 8921           | .3348 |
| .6653 | 69 7162        | 1 8587     | 8 8548     | 5 7612            | 3 2474           | .3347 |
| .6654 | 72 4622        | 1 4316     | 8 5044     | 4 8700            | 3 6025           | .3346 |
| .6655 | <b>75</b> 2085 | 1 0042     | 8 1538     | 3 9785            | 3 9575           | .3345 |
| .6656 | 77 9552        | 0 5765     | 7 8029     | 3 0868            | 4 3124           | .3344 |
| .6657 | 80 7021        | .3640 1486 | 7 4517     | 2 1948            | 4 6672           | .3343 |
| .6658 | 83 4494        | .3639 7204 | 7 1004     | 1 3026            | 5 0218           | .3342 |
| .6659 | 86 1971        | 9 2919     | 6 7488     | .7460 4101        | 5 3763           | .3341 |
| .6660 | .4288 9450     | .3638 8632 | .4716 3969 | .7459 5174        | .9425 7307       | .3340 |
| .6661 | 91 6933        | 8 4341     | 6 0448     | 8 6245            | 6 0850           | .3339 |
| .6662 | 94 4419        | 8 0048     | 5 6925     | 7 7313            | 6 4392           | .3338 |
| .6663 | 97 1909        | 7 5752     | 5 3400     | 6 8379            | 6 7933           | .3337 |
| .6664 | .4299 9401     | 7 1454     | 4 9872     | 5 9442            | 7 1472           | .3336 |
| .6665 | .4302 6896     | 6 7152     | 4 6341     | 5 0503            | 7 5010           | .3335 |
| .6666 | 05 4395        | 6 2848     | 4 2809     | 4 1562            | 7 8547           | .3334 |
| .6667 | 08 1898        | 5 8542     | 3 9273     | 3 2618            | 8 2083           | .3333 |
| .6668 | 10 9403        | 5 4232     | 3 5736     | 2 3671            | 8 5617           | .3332 |
| .6669 | 13 6912        | 4 9920     | 3 2196     | 1 4723            | 8 9150           | .3331 |
| .6670 | .4316 4424     | .3634 5605 | .4712 8654 | .7450 5772        | .9429 2683       | .3330 |
| .6671 | 19 1939        | 4 1287     | 2 5109     | .7449 6818        | 9 6214           | .3329 |
| .6672 | 21 9458        | 3 6966     | 2 1562     | 8 7862            | .9429 9743       | .3328 |
| .6673 | 24 6980        | 3 2643     | 1 8012     | 7 8904            | .9430 3272       | .3327 |
| .6674 | 27 4504        | 2 8317     | 1 4461     | 6 9943            | 0 6799           | .3326 |
| .6675 | 30 2033        | 2 3988     | 1 0906     | 6 0980            | 1 0326           | .3325 |
| .6676 | 32 9565        | 1 9656     | 0 7350     | 5 2014            | 1 3851           | .3324 |
| .6677 | 35 7100        | 1 5322     | 0 3791     | 4 3046            | 1 7374           | .3323 |
| .6678 | 38 4638        | 1 0985     | .4710 0229 | 3 4076            | 2 0897           | .3322 |
| .6679 | 41 2179        | 0 6645     | .4709 6665 | 2 5103            | 2 4418           | .3321 |
| .6680 | .4343 9724     | .3630 2303 | .4709 3099 | .7441 6127        | .9432 7939       | .3320 |
| .6681 | 46 7272        | .3629 7957 | 8 9531     | .7440 7150        | 3 1458           | .3319 |
| .6682 | 49 4824        | 9 3609     | 8 5960     | .7439 8169        | 3 4975           | .3318 |
| .6683 | 52 2378        | 8 9258     | 8 2386     | 8 9187            | 3 8492           | .3317 |
| .6684 | 54 9936        | 8 4905     | 7 8811     | 8 0202            | 4 2008           | .3316 |
| .6685 | 57 7498        | 8 0548     | 7 5232     | 7 1214            | 4 5522           | .3315 |
| .6686 | 60 5062        | 7 6189     | 7 1652     | 6 2224            | 4 9035           | .3314 |
| .6687 | 63 2630        | 7 1827     | 6 8069     | 5 3232            | 5 2547           | .3313 |
| .6688 | 66 0201        | 6 7463     | 6 4483     | 4 4237            | 5 6058           | .3312 |
| .6689 | 68 7776        | 6 3095     | 6 0896     | 3 5240            | 5 9567           | .3311 |
| .6690 | .4371 5354     | .3625 8725 | .4705 7305 | .7432 6240        | .9436 3075       | .3310 |
| .6691 | 74 2935        | 5 4352     | 5 3713     | 1 7238            | 6 6583           | .3309 |
| .6692 | 77 0520        | 4 9976     | 5 0118     | .7430 8234        | 7 0088<br>7 3593 | .3308 |
| .6693 | 79 8108        | 4 5598     | 4 6521     | .7429 9227        |                  | .3307 |
| .6694 | 82 5699        | 4 1217     | 4 2921     | 9 0217            | 7 7097           | .3306 |
| .6695 | 85 3294        | 3 6833     | 3 9319     | 8 1206            | 8 0599           | .3305 |
| .6696 | 88 0892        | 3 2446     | 3 5714     | 7 2191            | 8 4100           | .3304 |
| .6697 | 90 8493        | 2 8057     | 3 2107     | 6 3175            | 8 7600           | .3303 |
| .6698 | 93 6098        | 2 3664     | 2 8498     | 5 4155            | 9 1099           | .3302 |
| .6699 | 96 3706        | 1 9270     | 2 4886     | 4 5134            | 9 4597           | .3301 |
| .6700 | .4399 1317     | .3621 4872 | .4702 1272 | .7423 6110        | .9439 8093       | .3300 |

E<sup>-11</sup>= ε<sup>11</sup>=.0000,0000+ .0000,000+ .0000,000+

.6700 .3300

| p              | x                     | z                    | √pq              | $\sqrt{1-p^2}$   | $\sqrt{1-q^2}$   | q              |
|----------------|-----------------------|----------------------|------------------|------------------|------------------|----------------|
| .6700          | .4399 1317            | .3621 4872           | .4702 1272       | .7423 6110       | .9439 8093       | .3300          |
| .6701          | .4401 8931            | 1 0471               | 1 7655           | 2 7083           | .9440 1588       | .3299          |
| .6702          | 04 6549               | 0 6068               | 1 4036           | 1 8054           | 0 5082           | .3298          |
| .6703          | 07 4171               | .3620 1662           | 1 0415           | .7420 9023       | 0 8575           | .3297          |
| .6704          | 10 1795               | .3619 7253           | 0 6791           | .7419 9989       | 1 2067           | .3296          |
| .6705          | 12 9423               | 9 2842               | .4700 3165       | 9 0953           | 1 5558           | .3295          |
| .6706          | 15 7055               | 8 8427               | .4699 9536       | 8 1914           | 1 9047           | .3294          |
| .6707          | 18 4690               | 8 4010               | 9 5905           | 7 2873           | 2 2535           | .3293          |
| .6708<br>.6709 | 21 2328<br>23 9969    | 7 9590<br>7 5168     | 9 2272<br>8 8636 | 6 3829<br>5 4783 | 2 6022<br>2 9508 | .3292<br>.3291 |
|                |                       | <del></del>          | .4698 4998       | .7414 5735       | .9443 2992       |                |
| .6710          | .4426 7614            | .3617 0742           |                  |                  |                  | .3290          |
| .6711          | 29 5262               | 6 6314               | 8 1357           | 3 6684           | 3 6475           | .3289          |
| .6712<br>.6713 | 32 2914<br>35 0569    | 6 1883<br>5 7450     | 7 7714<br>7 4068 | 2 7630<br>1 8575 | 3 9958<br>4 3439 | .3288<br>.3287 |
| .6714          | 37 8228               | 5 3013               | 7 0420           | 0 9516           | 4 6918           | .3286          |
| .6715          | 40 5890               | 4 8574               | 6 6770           | .7410 0455       | 5 0397           | .3285          |
| .6716          | 43 3555               | 4 4132               | 6 3117           | .7409 1392       | 5 3874           | .3284          |
| .6717          | 46 1224               | 3 9687               | 5 9462           | 8 2327           | 5 7351           | .3283          |
| .6718          | 48 8896               | 3 5240               | 5 5805           | 7 3258           | 6 0826           | .3282          |
| .6719          | 51 6572               | 3 0789               | 5 2145           | 6 4188           | 6 4300           | .3281          |
| .6720          | .4454 4251            | .3612 6336           | .4694 8482       | .7405 5115       | .9446 7772       | .3280          |
| .6721          | 57 1933               | 2 1881               | 4 4818           | 4 6039           | 7 1244           | .3279          |
| .6722<br>.6723 | 59 9619<br>62 7308    | 1 7422<br>1 2961     | 4 1150<br>3 7481 | 3 6961<br>2 7881 | 7 4714<br>7 8183 | .3278<br>.3277 |
|                |                       |                      | i                |                  |                  |                |
| .6724<br>.6725 | 65 5001<br>68 2697    | 0 8497<br>.3610 4030 | 3 3809<br>3 0134 | 1 8798<br>0 9712 | 8 1651<br>8 5118 | .3276<br>.3275 |
| .6726          | 71 0396               | .3609 9560           | 2 6457           | .7400 0624       | 8 8583           | .3274          |
| .6727          | 73 8099               | 9 5088               | 2 2778           | .7399 1534       | 9 2048           | .3273          |
| .6728          | <b>76</b> 5805        | 9 0612               | 1 9096           | 8 2441           | 9 5511           | .3272          |
| .6729          | 79 3515               | 8 6134               | 1 5412           | 7 3346           | .9449 8973       | .3271          |
| . 6730         | .4482 1228            | .3608 1654           | .4691 1726       | .7396 4248       | .9450 2434       | .3270          |
| .6731          | 84 8945               | 7 7170               | 0 8037           | 5 5148           | 0 5893           | .3269          |
| .6732          | 87 6665               | 7 2684               | 0 4345           | 4 6045           | 0 9352           | .3268          |
| .6733          | 90 4388               | 6 8195               | .4690 0651       | 3 6940           | 1 2809           | .3267          |
| .6734          | 93 2115               | 6 3703               | .4689 6955       | 2 7832           | 1 6265           | .3266          |
| .6735<br>.6736 | 95 9846<br>.4498 7580 | 5 9208<br>5 4711     | 9 3256<br>8 9555 | 1 8722<br>0 9610 | 1 9720<br>2 3174 | .3265<br>.3264 |
| .6737          | .4501 5317            | 5 0211               | 8 5852           | .7390 0495       | 2 6626           | .3263          |
| .6738          | 04 3058               | 4 5708               | 8 2146           | .7389 1377       | 3 0078           | .3262          |
| .6739          | 07 0802               | 4 1202               | 7 8437           | 8 2257           | 3 3528           | .3261          |
| .6740          | .4509 8550            | .3603 6694           | .4687 4727       | .7387 3134       | .9453 6977       | .3260          |
| .6741          | 12 6301               | 3 2183               | 7 1013           | 6 4010           | 4 0425           | .3259          |
| .6742          | 15 4056               | 2 7669               | 6 7298           | 5 4882           | 4 3871           | .3258          |
| .6743          | 18 1814               | 2 3152               | 6 3580           | 4 5752           | 4 7317           | .3257          |
| .6744          | 20 9576               | 1 8632               | 5 9859           | 3 6620<br>3 7485 | 5 0761<br>5 4204 | .3256<br>.3255 |
| .6745<br>.6746 | 23 7341<br>26 5110    | 1 4110<br>0 9585     | 5 6136<br>5 2411 | 2 7485<br>1 8347 | 5 7646           | .3254          |
| .6747          | 29 2882               | 0 5057               | 4 8683           | 0 9207           | 6 1087           | .3253          |
| .6748          | 32 0657               | .3600 0526           | 4 4953           | .7380 0065       | 6 4526           | .3252          |
| .6749          | 34 8436               | .3599 5993           | 4 1220           | .7379 0920       | 6 7964           | .3251          |
| .6750          | .4537 6219            | .3599 1456           | .4683 7485       | .7378 1773       | .9457 1402       | .3250          |

e<sup>-1i</sup>= ε<sup>1i</sup>=.0000,0000+ .0000,000+ .0000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .0000,000+ .00000,000+ .0000,000+ .0000,000+ .0000,000+ .00000,000+ .00000,000+

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .6750 | .4537 6219 | .3599 1456 | .4683 7485 | .7378 1773     | .9457 1402     | .3250 |
| .6751 | 40 4005    | 8 6917     | 3 3747     | 7 2623         | 7 4838         | .3249 |
| .6752 | 43 1795    | 8 2376     | 3 0007     | 6 3471         | 7 8272         | .3248 |
| .6753 | 45 9588    | 7 7831     | 2 6265     | 5 4316         | 8 1706         | .3247 |
| .6754 | 48 7385    | 7 3284     | 2 2520     | 4 5158         | 8 5138         | .3246 |
| .6755 | 51 5185    | 6 8734     | 1 8773     | 3 5999         | 8 8570         | .3245 |
| .6756 | 54 2988    | 6 4181     | 1 5023     | 2 6836         | 9 <b>200</b> 0 | .3244 |
| .6757 | 57 0795    | 5 9625     | 1 1271     | 1 7672         | 9 5429         | .3243 |
| .6758 | 59 8606    | 5 5067     | 0 7516     | .7370 8504     | .9459 8856     | .3242 |
| .6759 | 62 6420    | 5 0505     | 0 3759     | .7369 9334     | .9460 2283     | .3241 |
| .6760 | .4565 4238 | .3594 5941 | .4680 0000 | .7369 0162     | .9460 5708     | .3240 |
| .6761 | 68 2059    | 4 1374     | .4679 6238 | 8 0987         | 0 9132         | .3239 |
| .6762 | 70 9884    | 3 6805     | 9 2474     | 7 1810         | 1 2555         | .3238 |
| .6763 | 73 7713    | 3 2232     | 8 8707     | 6 2630         | 1 5977         | .3237 |
| .6764 | 76 5545    | 2 7657     | 8 4938     | 5 3448         | 1 9398         | .3236 |
| .6765 | 79 3380    | 2 3079     | 8 1166     | 4 4263         | 2 2817         | .3235 |
| .6766 | 82 1219    | 1 8499     | 7 7392     | 3 5076         | 2 6235         | .3234 |
| .6767 | 84 9062    | 1 3915     | 7 3615     | 2 5886         | 2 9652         | .3233 |
| .6768 | 87 6908    | 0 9329     | 6 9836     | 1 6694         | 3 3068         | .3232 |
| .6769 | 90 4758    | 0 4740     | 6 6055     | .7360 7499     | 3 6483         | .3231 |
| .6770 | .4593 2611 | .3590 0148 | .4676 2271 | .7359 8302     | .9463 9896     | .3230 |
| .6771 | 96 0468    | .3589 5553 | 5 8485     | 8 9102         | 4 3309         | .3229 |
| .6772 | .4598 8328 | 9 0956     | 5 4696     | 7 9899         | 4 6720         | .3228 |
| .6773 | .4601 6192 | 8 6356     | 5 0905     | 7 0695         | 5 0130         | .3227 |
| .6774 | 04 4060    | 8 1753     | 4 7111     | 6 1487         | 5 3539         | .3226 |
| .6775 | 07 1931    | 7 7147     | 4 3315     | 5 2277         | 5 6946         | .3225 |
| .6776 | 09 9805    | 7 2538     | 3 9516     | 4 3065         | 6 0353         | .3224 |
| .6777 | 12 7684    | 6 7927     | 3 5715     | 3 3850         | 6 3758         | .3223 |
| .6778 | 15 5566    | 6 3313     | 3 1912     | 2 4633         | 6 7162         | .3222 |
| .6779 | 18 3451    | 5 8696     | 2 8106     | 1 5413         | 7 0565         | .3221 |
| .6780 | .4621 1340 | .3585 4076 | .4672 4298 | .7350 6190     | .9467 3967     | .3220 |
| .6781 | 23 9233    | 4 9453     | 2 0487     | .7349 6965     | 7 7367         | .3219 |
| .6782 | 26 7129    | 4 4828     | 1 6674     | 8 7738         | 8 0767         | .3218 |
| .6783 | 29 5029    | 4 0200     | 1 2858     | 7 8508         | 8 4165         | .3217 |
| .6784 | 32 2932    | 3 5569     | 0 9040     | 6 9275         | 8 7562         | .3216 |
| .6785 | 35 0839    | 3 0935     | 0 5219     | 6 0040         | 9 0958         | .3215 |
| .6786 | 37 8750    | 2 6299     | .4670 1396 | 5 0803         | 9 4353         | .3214 |
| .6787 | 40 6664    | 2 1660     | .4669 7571 | 4 1562         | .9469 7746     | .3213 |
| .6788 | 43 4582    | 1 7018     | 9 3743     | 3 2320         | .9470 1138     | .3212 |
| .6789 | 46 2504    | 1 2373     | 8 9912     | 2 3075         | 0 4529         | .3211 |
| .6790 | .4649 0429 | .3580 7725 | .4668 6079 | .7341 3827     | .9470 7919     | .3210 |
| .6791 | 51 8358    | .3580 3075 | 8 2244     | .7340 4577     | 1 1308         | .3209 |
| .6792 | 54 6290    | .3579 8421 | 7 8406     | .7339 5324     | 1 4696         | .3208 |
| .6793 | 57 4226    | 9 3765     | 7 4566     | 8 6069         | 1 8082         | .3207 |
| .6794 | 60 2166    | 8 9107     | 7 0723     | 7 6811         | 2 1467         | .3206 |
| .6795 | 63 0109    | 8 4445     | 6 6878     | 6 7551         | 2 4852         | .3205 |
| .6796 | 65 8056    | 7 9781     | 6 3030     | 5 8288         | 2 8234         | .3204 |
| .6797 | 68 6006    | 7 5113     | 5 9180     | 4 9022         | 3 1616         | .3203 |
| .6798 | 71 3961    | 7 0443     | 5 5328     | 3 9755         | 3 4997         | .3202 |
| .6799 | 74 1919    | 6 5771     | 5 1473     | 3 0484         | 3 8376         | .3201 |
| .6800 | .4676 9880 | .3576 1095 | .4664 7615 | .7332 1211     | .9474 1754     | .3200 |

 $E^{-1}$ !=  $E^{1}$ !=.0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

TABLE I

.6800

.3200

| P              | x                        | z                    | √pq              | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q              |
|----------------|--------------------------|----------------------|------------------|--------------------------|----------------------|----------------|
| .6800          | .4676 9880               | .3576 1095           | .4664 7615       | .7332 1211               | .9474 1754           | .3200          |
| .6801          | 79 7845                  | 5 6417               | 4 3755           | 1 1936                   | 4 5131               | .3199          |
| .6802<br>.6803 | 82 5814<br>85 3787       | 5 1735<br>4 7051     | 3 9893<br>3 6028 | .7330 2658<br>.7329 3377 | 4 8507<br>5 1882     | .3198<br>.3197 |
| .6804          | 88 1763                  | 4 2365               | 3 2161           | 8 4094                   | 5 5255               | .3196          |
| .6805          | 90 9743                  | 3 7675               | 2 8291           | 7 4808                   | 5 8628               | .3195          |
| .6806          | 93 7726                  | 3 2983               | 2 4418           | 6 5520                   | 6 1999               | .3194          |
| .6807          | 96 5713                  | 2 8288               | 2 0544           | 5 6229                   | 6 5369               | .3193          |
| .6808<br>.6809 | .4699 3704<br>.4702 1699 | 2 3590<br>1 8889     | 1 6667<br>1 2787 | 4 6936<br>3 7640         | 6 8737<br>7 2105     | .3192<br>.3191 |
| .6810          | .4704 9697               | .3571 4185           | .4660 8905       | .7322 8342               | .9477 5472           | .3190          |
| .6811          | 07 7699                  | 0 9479               | 0 5020           | 1 9041                   | 7 8837               | .3189          |
| .6812          | 10 5705                  | 0 4770               | .4660 1133       | 0 9737                   | 8 2201               | .3188          |
| .6813          | 13 3714                  | .3570 0058           | .4659 7243       | .7320 0431               | 8 5564               | .3187          |
| .6814<br>.6815 | 16 1727<br>18 9744       | .3569 5343<br>9 0625 | 9 3351<br>8 9457 | .7319 1122<br>8 1811     | 8 8926<br>9 2286     | .3186          |
| .6816          | 21 7764                  | 8 5905               | 8 5560           | 7 2498                   | 9 5645               | .3185<br>.3184 |
| .6817          | 24 5788                  | 8 1182               | 8 1661           | 6 3181                   | .9479 9004           | .3183          |
| .6818<br>.6819 | 27 3816<br>30 1848       | 7 6456<br>7 1727     | 7 7759<br>7 3854 | 5 3863<br>4 4541         | .9480 2361<br>0 5717 | .3182<br>.3181 |
| .6820          | .4732 9883               | .3566 6995           | .4656 9947       | .7313 5217               | .9480 9071           | .3180          |
| .6821          | 35 7922                  | 6 2261               | 6 6038           | 2 5891                   | 1 2425               | .3179          |
| .6822          | 38 5964                  | 5 7524               | 6 2126           | 1 6562                   | 1 5777               | .3178          |
| .6823          | 41 4011                  | 5 2784               | 5 8212           | .7310 7230               | 1 9128               | .3177          |
| .6824<br>.6825 | 44 2061<br>47 0115       | 4 8041<br>4 3295     | 5 4295<br>5 0376 | .7309 7896<br>8 8559     | 2 2478<br>2 5827     | .3176<br>.3175 |
| .6826          | 49 8172                  | 3 8547               | 4 6454           | 7 9220                   | 2 9175               | .3174          |
| .6827          | 52 6234                  | 3 3796               | 4 2530           | 6 9878                   | 3 2521               | .3173          |
| .6828<br>.6829 | 55 4299<br>58 2367       | 2 9042<br>2 4285     | 3 8603           | 6 0534                   | 3 5867<br>3 9211     | .3172          |
| .6830          | .4761 0440               | .3561 9525           | 3 4674           | 5 1187                   | .9484 2554           | .3171          |
| .6831          | 63 8516                  | 1 4763               | 2 6808           | 3 2485                   | 4 5896               | .3169          |
| .6832          | 66 6596                  | 0 9998               | 2 2872           | 2 3131                   | 4 9236               | .3168          |
| .6833          | 69 4680                  | 0 5230               | 1 8933           | 1 3773                   | 5 2576               | .3167          |
| .6834          | 72 2768                  | .3560 0459           | 1 4991           | .7300 4414               | 5 5914               | .3166          |
| .6835<br>.6836 | 75 0860<br>77 8955       | .3559 5685<br>9 0908 | 1 1047<br>0 7101 | .7299 5051<br>8 5686     | 5 9251<br>6 2587     | .3165<br>.3164 |
| .6837          | 80 7053                  | 8 6129               | .4650 3152       | 7 6319                   | 6 5922               | .3163          |
| .6838          | 83 5156                  | 8 1347               | .4649 9200       | 6 6949                   | 6 9255               | .3162          |
| .6839          | 86 3263<br>.4789 1373    | 7 6562<br>.3557 1774 | 9 5246           | 5 7576<br>.7294 8201     | 7 2588<br>.9487 5919 | .3161<br>.3160 |
|                | 91 9487                  |                      |                  | 3 8823                   | 7 9249               | .3159          |
| .6841<br>.6842 | 94 7605                  | 6 6984<br>6 2191     | 8 7331<br>8 3369 | 2 9443                   | 8 2578               | .3158          |
| .6843          | .4797 5727               | 5 7394               | 7 9405           | 2 0060                   | 8 5906               | .3157          |
| .6844          | .4800 3852               | 5 2595               | 7 5439           | 1 0674                   | 8 9232               | .3156          |
| .6845          | 03 1982<br>06 0115       | 4 7794<br>4 2989     | 7 1470<br>6 7498 | .7290 1286<br>.7289 1895 | 9 2558<br>9 5882     | .3155<br>.3154 |
| .6847          | 08 8251                  | 3 8182               | 6 3524           | 8 2502                   | .9489 9205           | .3153          |
| .6848          | 11 6392                  | 3 3371               | 5 9548           | 7 3106                   | .9490 2527           | .3152          |
| .6849          | 14 4537                  | 2 8558               | 5 5569           | 6 3708                   | 0 5848               | .3151          |
| .6850          | .4817 2685               | .3552 3742           | .4645 1588       | .7285 4307               | .9490 9167           | .3150          |

TABLE I

.6850

.3150

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .6850 | .4817 2685 | .3552 3742 | .4645 1588 | .7285 4307     | .9490 9167     | .3150 |
| .6851 | 20 0837    | 1 8924     | 4 7604     | 4 4903         | 1 2485         | .3149 |
| .6852 | 22 8993    | 1 4102     | 4 3617     | 3 5497         | 1 5803         | .3148 |
| .6853 | 25 7153    | 0 9278     | 3 9629     | 2 6088         | 1 9119         | .3147 |
| .6854 | 28 5316    | .3550 4451 | 3 5637     | 1 6677         | 2 2434         | .3146 |
| .6855 | 31 3484    | .3549 9621 | 3 1643     | .7280 7263     | 2 5747         | .3145 |
| .6856 | 34 1655    | 9 4788     | 2 7647     | .7279 7846     | 2 9060         | .3144 |
| .6857 | 36 9830    | 8 9953     | 2 3648     | 8 8427         | 3 2371         | .3143 |
| .6858 | 39 8009    | 8 5114     | 1 9647     | 7 9005         | 3 5681         | .3142 |
| .6859 | 42 6191    | 8 0273     | 1 5643     | 6 9581         | 3 8990         | .3141 |
| .6860 | .4845 4378 | .3547 5429 | .4641 1636 | .7276 0154     | .9494 2298     | .3140 |
| .6861 | 46 2568    | 7 0582     | 0 7628     | 5 0724         | 4 5605         | .3139 |
| .6862 | 51 0763    | 6 5732     | .4640 3616 | 4 1292         | 4 8910         | .3138 |
| .6863 | 53 8961    | 6 0880     | .4639 9602 | 3 1858         | 5 2215         | .3137 |
| .6864 | 56 7163    | 5 6025     | 9 5586     | 2 2420         | 5 5518         | .3136 |
| .6865 | 59 5369    | 5 1167     | 9 1567     | 1 2980         | 5 8820         | .3135 |
| .6866 | 62 3579    | 4 6306     | 8 7546     | .7270 3538     | 6 2121         | .3134 |
| .6867 | 65 1793    | 4 1442     | 8 3522     | .7269 4093     | 6 5421         | .3133 |
| .6868 | 68 0010    | 3 6575     | 7 9495     | 8 4645         | 6 8719         | .3132 |
| .6869 | 70 8232    | 3 1706     | 7 5467     | 7 5195         | 7 2016         | .3131 |
| .6870 | .4873 6457 | .3542 6834 | .4637 1435 | .7266 5742     | .9497 5313     | .3130 |
| .6871 | 76 4686    | 2 1958     | 6 7401     | 5 6286         | 7 8608         | .3129 |
| .6872 | 79 2919    | 1 7081     | 6 3365     | 4 6828         | 8 1901         | .3128 |
| .6873 | 82 1156    | 1 2200     | 5 9326     | 3 7367         | 8 5194         | .3127 |
| .6874 | 84 9397    | 0 7316     | 5 5284     | 2 7904         | 8 8486         | .3126 |
| .6875 | 87 7641    | .3540 2430 | 5 1241     | 1 8438         | 9 1776         | .3125 |
| .6876 | 90 5890    | .3539 7541 | 4 7194     | .7260 8969     | 9 5065         | .3124 |
| .6877 | 93 4142    | 9 2649     | 4 3145     | .7259 9498     | .9499 8353     | .3123 |
| .6878 | 96 2399    | 8 7754     | 3 9094     | 9 0024         | .9500 1640     | .3122 |
| .6879 | .4899 0659 | 8 2856     | 3 5040     | 8 0548         | 0 4926         | .3121 |
| .6880 | .4901 8923 | .3537 7956 | .4633 0983 | .7257 1069     | .9500 8210     | .3120 |
| .6881 | 04 7191    | 7 3053     | 2 6924     | 6 1587         | 1 1494         | .3119 |
| .6882 | 07 5463    | 6 8146     | 2 2863     | 5 2103         | 1 4776         | .3118 |
| .6883 | 10 3739    | 6 3237     | 1 8799     | 4 2616         | 1 8057         | .3117 |
| .6884 | 13 2019    | 5 8326     | 1 4732     | 3 3126         | 2 1337         | .3116 |
| .6885 | 16 0303    | 5 3411     | 1 0663     | 2 3634         | 2 4615         | .3115 |
| .6886 | 18 8591    | 4 8494     | 0 6591     | 1 4139         | 2 7893         | .3114 |
| .6887 | 21 6882    | 4 3573     | .4630 2517 | .7250 4642     | 3 1169         | .3113 |
| .6888 | 24 5178    | 3 8650     | .4629 8441 | .7249 5142     | 3 4444         | .3112 |
| .6889 | 27 3477    | 3 3724     | 9 4361     | 8 5639         | 3 7718         | .3111 |
| .6890 | .4930 1781 | .3532 8796 | .4629 0280 | .7247 6134     | .9504 0991     | .3110 |
| .6891 | 33 0089    | 2 3864     | 8 6196     | 6 6626         | 4 4263         | .3109 |
| .6892 | 35 8400    | 1 8930     | 8 2109     | 5 7116         | 4 7533         | .3108 |
| .6893 | 38 6716    | 1 3992     | 7 8020     | 4 7602         | 5 0803         | .3107 |
| .6894 | 41 5035    | 0 9052     | 7 3928     | 3 8087         | 5 4071         | .3106 |
| .6895 | 44 3358    | .3530 4109 | 6 9834     | 2 8568         | 5 7338         | .3105 |
| .6896 | 47 1686    | .3529 9164 | 6 5737     | 1 9047         | 6 0604         | .3104 |
| .6897 | 50 0017    | 9 4215     | 6 1637     | .7240 9524     | 6 3869         | .3103 |
| .6898 | 52 8352    | 8 9264     | 5 7536     | .7239 9997     | 6 7132         | .3102 |
| .6899 | 55 6692    | 8 4309     | 5 3431     | 9 0468         | 7 0394         | .3101 |
| .6900 | .4958 5035 | .3527 9352 | .4624 9324 | .7238 0937     | .9507 3656     | .3100 |

 $E^{-i}i_{=}$   $E^{i}i_{=,0000,0001}$  .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.6900 .3100

| p     | ×          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .6900 | .4958 5035 | .3527 9352 | .4624 9324 | .7238 0937     | .9507 3656     | .3100 |
| .6901 | 61 3382    | 7 4392     | 4 5215     | 7 1403         | 7 6916         | .3099 |
| .6902 | 64 1733    | 6 9430     | 4 1103     | 6 1866         | 8 0175         | .3098 |
| .6903 | 67 0088    | 6 4464     | 3 6988     | 5 2326         | 8 3432         | .3097 |
| .6904 | 69 8447    | 5 9496     | 3 2871     | 4 2784         | 8 6689         | .3096 |
| .6905 | 72 6810    | 5 4524     | 2 8752     | 3 3239         | 8 9944         | .3095 |
| .6906 | 75 5178    | 4 9550     | 2 4630     | 2 3692         | 9 3198         | .3094 |
| .6907 | 78 3549    | 4 4573     | 2 0505     | 1 4142         | 9 6452         | .3093 |
| .6908 | 81 1924    | 3 9593     | 1 6378     | .7230 4589     | .9509 9703     | .3092 |
| .6909 | 84 0303    | 3 4611     | 1 2248     | .7229 5034     | .9510 2954     | .3091 |
| .6910 | .4986 8686 | .3522 9625 | .4620 8116 | .7228 5476     | .9510 6204     | .3090 |
| .6911 | 89 7073    | 2 4637     | .4620 3981 | 7 5915         | 0 9452         | .3089 |
| .6912 | 92 5464    | 1 9646     | .4619 9844 | 6 6352         | 1 2699         | .3088 |
| .6913 | 95 3860    | 1 4652     | 9 5704     | 5 6786         | 1 5946         | .3087 |
| .6914 | .4998 2259 | 0 9655     | 9 1562     | 4 7217         | 1 9190         | .3086 |
| .6915 | .5001 0662 | .3520 4656 | 8 7417     | 3 7646         | 2 2434         | .3085 |
| .6916 | 03 9070    | .3519 9653 | 8 3270     | 2 8072         | 2 5677         | .3084 |
| .6917 | 06 7481    | 9 4648     | 7 9120     | 1 8496         | 2 8918         | .3083 |
| .6918 | 09 5897    | 8 9640     | 7 4967     | .7220 8916     | 3 2159         | .3082 |
| .6919 | 12 4316    | 8 4629     | 7 0812     | .7219 9334     | 3 5398         | .3081 |
| .6920 | .5015 2740 | .3517 9615 | .4616 6655 | .7218 9750     | .9513 8636     | .3080 |
| .6921 | 18 1168    | 7 4598     | 6 2495     | 8 0163         | 4 1872         | .3079 |
| .6922 | 20 9599    | 6 9578     | 5 8332     | 7 0573         | 4 5108         | .3078 |
| .6923 | 23 8035    | 6 4556     | 5 4167     | 6 0980         | 4 8343         | .3077 |
| .6924 | 26 6475    | 5 9531     | 4 9999     | 5 1385         | 5 1576         | .3076 |
| .6925 | 29 4919    | 5 4503     | 4 5829     | 4 1787         | 5 4808         | .3075 |
| .6926 | 32 3367    | 4 9472     | 4 1656     | 3 2187         | 5 8039         | .3074 |
| .6927 | 35 1819    | 4 4438     | 3 7480     | 2 2584         | 6 1269         | .3073 |
| .6928 | 38 0275    | 3 9401     | 3 3303     | 1 2978         | 6 4498         | .3072 |
| .6929 | 40 8735    | 3 4362     | 2 9122     | .7210 3370     | 6 7725         | .3071 |
| .6930 | .5043 7199 | .3512 9320 | .4612 4939 | .7209 3758     | .9517 0951     | .3070 |
| .6931 | 46 5667    | 2 4275     | 2 0753     | 8 4145         | 7 4177         | .3069 |
| .6932 | 49 4140    | 1 9227     | 1 6565     | 7 4528         | 7 7401         | .3068 |
| .6933 | 52 2616    | 1 4176     | 1 2375     | 6 4909         | 8 0624         | .3067 |
| .6934 | 55 1097    | 0 9122     | 0 8181     | 5 5287         | 8 3845         | .3066 |
| .6935 | 57 9581    | .3510 4066 | .4610 3986 | 4 5663         | 8 7066         | .3065 |
| .6936 | 60 8070    | .3509 9006 | .4609 9787 | 3 6035         | 9 0285         | .3064 |
| .6937 | 63 6563    | 9 3944     | 9 5587     | 2 6406         | 9 3503         | .3063 |
| .6938 | 66 5060    | 8 8879     | 9 1383     | 1 6773         | 9 6721         | .3062 |
| .6939 | 69 3561    | 8 3811     | 8 7177     | .7200 7138     | .9519 9936     | .3061 |
| .6940 | .5072 2066 | .3507 8740 | .4608 2969 | .7199 7500     | .9520 3151     | .3060 |
| .6941 | 75 0575    | 7 3667     | 7 8758     | 8 7859         | 0 6365         | .3059 |
| .6942 | 77 9089    | 6 8590     | 7 4544     | 7 8216         | 0 9577         | .3058 |
| .6943 | 80 7607    | 6 3511     | 7 0328     | 6 8570         | 1 2789         | .3057 |
| .6944 | 83 6128    | 5 8429     | 6 6109     | 5 8922         | 1 5999         | .3056 |
| .6945 | 86 4654    | 5 3343     | 6 1888     | 4 9270         | 1 9208         | .3055 |
| .6946 | 89 3184    | 4 8256     | 5 7664     | 3 9616         | 2 2415         | .3054 |
| .6947 | 92 1719    | 4 3165     | 5 3437     | 2 9960         | 2 5622         | .3053 |
| .6948 | 95 0257    | 3 8071     | 4 9208     | 2 0300         | 2 8828         | .3052 |
| .6949 | .5097 8799 | 3 2975     | 4 4977     | 1 0638         | 3 2032         | .3051 |
| .6950 | .5100 7346 | .3502 7875 | .4604 0743 | .7190 0974     | .9523 5235     | .3050 |

 $E^{-\frac{1}{2}}$   $E^{\frac{1}{2}}$ .0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .6950 | .5100 7346 | .3502 7875 | .4604 0743 | .7190 0974     | .9523 5235     | .3050 |
| .6951 | 03 5897    | 2 2773     | 3 6506     | .7189 1306     | 3 8437         | .3049 |
| .6952 | 06 4452    | 1 7668     | 3 2267     | 8 1636         | 4 1638         | .3048 |
| .6953 | 09 3011    | 1 2560     | 2 8025     | 7 1963         | 4 4838         | .3047 |
| .6954 | 12 1574    | 0 7450     | 2 3781     | 6 2288         | 4 8036         | .3046 |
| .6955 | 15 0141    | .3500 2336 | 1 9534     | 5 2610         | 5 1234         | .3045 |
| .6956 | 17 8713    | .3499 7220 | 1 5284     | 4 2929         | 5 4430         | .3044 |
| .6957 | 20 7289    | 9 2100     | 1 1032     | 3 3245         | 5 7625         | .3043 |
| .6958 | 23 5869    | 8 6978     | 0 6778     | 2 3559         | 6 0819         | .3042 |
| .6959 | 26 4453    | 8 1853     | .4600 2521 | 1 3870         | 6 4012         | .3041 |
| .6960 | .5129 3041 | .3497 6725 | .4599 8261 | .7180 4178     | .9526 7203     | .3040 |
| .6961 | 32 1634    | 7 1595     | 9 3999     | .7179 4484     | 7 0394         | .3039 |
| .6962 | 35 0230    | 6 6461     | 8 9734     | 8 4787         | 7 3583         | .3038 |
| .6963 | 37 8831    | 6 1325     | 8 5466     | 7 5087         | 7 6771         | .3037 |
| .6964 | 40 7436    | 5 6185     | 8 1196     | 6 5384         | 7 9958         | .3036 |
| .6965 | 43 6046    | 5 1043     | 7 6924     | 5 5679         | 8 3144         | .3035 |
| .6966 | 46 4659    | 4 5898     | 7 2648     | 4 5971         | 8 6329         | .3034 |
| .6967 | 49 3277    | 4 0750     | 6 8371     | 3 6261         | 8 9512         | .3033 |
| .6968 | 52 1899    | 3 5599     | 6 4090     | 2 6547         | 9 2694         | .3032 |
| .6969 | 55 0526    | 3 0446     | 5 9807     | 1 6831         | 9 5876         | .3031 |
| .6970 | .5157 9156 | .3492 5289 | .4595 5522 | .7170 7113     | .9529 9056     | .3030 |
| .6971 | 60 7790    | 2 0130     | 5 1234     | .7169 7391     | .9530 2234     | .3029 |
| .6972 | 63 6429    | 1 4968     | 4 6943     | 8 7667         | 0 5412         | .3028 |
| .6973 | 66 5073    | 0 9803     | 4 2650     | 7 7940         | 0 8589         | .3027 |
| .6974 | 69 3720    | .3490 4635 | 3 8354     | 6 8211         | 1 1764         | .3026 |
| .6975 | 72 2371    | .3489 9464 | 3 4056     | 5 8478         | 1 4938         | .3025 |
| .6976 | 75 1027    | 9 4290     | 2 9755     | 4 8743         | 1 8112         | .3024 |
| .6977 | 77 9687    | 8 9114     | 2 5452     | 3 9005         | 2 1284         | .3023 |
| .6978 | 80 8352    | 8 3934     | 2 1145     | 2 9265         | 2 4454         | .3022 |
| .6979 | 83 7020    | 7 8752     | 1 6837     | 1 9522         | 2 7624         | .3021 |
| .6980 | .5186 5693 | .3487 3567 | .4591 2526 | .7160 9776     | .9533 0793     | .3020 |
| .6981 | 89 4370    | 6 8379     | 0 8212     | .7160 0027     | 3 3960         | .3019 |
| .6982 | 92 3052    | 6 3188     | .4590 3895 | .7159 0276     | 3 7126         | .3018 |
| .6983 | 95 1737    | 5 7994     | .4589 9576 | 8 0522         | 4 0291         | .3017 |
| .6984 | .5198 0427 | 5 2798     | 9 5255     | 7 0765         | 4 3455         | .3016 |
| .6985 | .5200 9121 | 4 7598     | 9 0930     | 6 1005         | 4 6618         | .3015 |
| .6986 | 03 7820    | 4 2396     | 8 6604     | 5 1243         | 4 9779         | .3014 |
| .6987 | 06 6523    | 3 7191     | 8 2274     | 4 1478         | 5 2940         | .3013 |
| .6988 | 09 5230    | 3 1983     | 7 7942     | 3 1710         | 5 6099         | .3012 |
| .6989 | 12 3941    | 2 6772     | 7 3608     | 2 1940         | 5 9257         | .3011 |
| .6990 | .5215 2657 | .3482 1558 | .4586 9271 | .7151 2167     | .9536 2414     | .3010 |
| .6991 | 18 1377    | 1 6341     | 6 4931     | .7150 2391     | 6 5570         | .3009 |
| .6992 | 21 0101    | 1 1121     | 6 0589     | .7149 2612     | 6 8724         | .3008 |
| .6993 | 23 8830    | 0 5899     | 5 6244     | 8 2831         | 7 1878         | .3007 |
| .6994 | 26 7563    | .3480 0674 | 5 1896     | 7 3047         | 7 5030         | .3006 |
| .6995 | 29 6300    | .3479 5446 | 4 7546     | 6 3260         | 7 8181         | .3005 |
| .6996 | 32 5042    | 9 0214     | 4 3194     | 5 3470         | 8 1332         | .3004 |
| .6997 | 35 3788    | 8 4980     | 3 8838     | 4 3678         | 8 4480         | .3003 |
| .6998 | 38 2538    | 7 9744     | 3 4480     | 3 3883         | 8 7628         | .3002 |
| .6999 | 41 1292    | 7 4504     | 3 0120     | 2 4085         | 9 0775         | .3001 |
| .7000 | .5244 0051 | .3476 9261 | .4582 5757 | .7141 4284     | .9539 3920     | .3000 |

E<sup>-1</sup> E<sup>1</sup> .0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| P     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|------------|----------------|----------------|--------|
| .7000 | .5244 0051 | .3476 9261 | .4582 5757 | .7141 4284     | .9539 3920     | .3000  |
| .7001 | 46 8814    | 6 4016     | 2 1391     | .7140 4481     | .9539 7064     | .2999  |
| .7002 | 49 7582    | 5 8768     | 1 7023     | .7139 4675     | .9540 0208     | .2998  |
| .7003 | 52 6354    | 5 3516     | 1 2652     | 8 4866         | 0 3350         | .2997  |
| .7004 | 55 5130    | 4 8262     | 0 8279     | 7 5054         | 0 6490         | .2996  |
| .7005 | 58 3911    | 4 3005     | .4580 3903 | 6 5240         | 0 9630         | .2995  |
| .7006 | 61 2696    | 3 7746     | .4579 9524 | 5 5423         | 1 2769         | .2994  |
| .7007 | 64 1485    | 3 2483     | 9 5143     | 4 5603         | 1 5906         | .2993  |
| .7008 | 67 0279    | 2 7217     | 9 0759     | 3 5781         | 1 9042         | .2992  |
| .7009 | 69 9077    | 2 1949     | 8 6372     | 2 5955         | 2 2177         | .2991  |
| .7010 | .5272 7879 | .3471 6677 | .4578 1983 | .7131 6127     | .9542 5311     | .2990  |
| .7011 | 75 6686    | 1 1403     | 7 7592     | .7130 6296     | 2 8444         | .2989  |
| .7012 | 78 5497    | 0 6126     | 7 3197     | .7129 6463     | 3 1575         | .2988  |
| .7013 | 81 4313    | .3470 0846 | 6 8801     | 8 6626         | 3 4706         | .2987  |
| .7014 | 84 3133    | .3469 5563 | 6 4401     | 7 6787         | 3 7835         | .2986  |
| .7015 | 87 1957    | 9 0278     | 5 9999     | 6 6945         | 4 0963         | .2985  |
| .7016 | 90 0786    | 8 4989     | 5 5594     | 5 7101         | 4 4090         | .2984  |
| .7017 | 92 9619    | 7 9697     | 5 1187     | 4 7253         | 4 7216         | . 2983 |
| .7018 | 95 8457    | 7 4403     | 4 6777     | 3 7403         | 5 0341         | . 2982 |
| .7019 | .5298 7299 | 6 9106     | 4 2364     | 2 7550         | 5 3465         | . 2981 |
| .7020 | .5301 6145 | .3466 3806 | .4573 7949 | .7121 7694     | .9545 6587     | .2980  |
| .7021 | 04 4996    | 5 8502     | 3 3531     | .7120 7836     | 5 9708         | . 2979 |
| .7022 | 07 3851    | 5 3197     | 2 9111     | .7119 7975     | 6 2828         | . 2978 |
| .7023 | 10 2710    | 4 7888     | 2 4688     | .8 8111        | 6 5947         | . 2977 |
| .7024 | 13 1574    | 4 2576     | 2 0262     | 7 8244         | 6 9065         | .2976  |
| .7025 | 16 0442    | 3 7261     | 1 5834     | 6 8374         | 7 2182         | .2975  |
| .7026 | 18 9315    | 3 1944     | 1 1403     | 5 8502         | 7 5297         | .2974  |
| .7027 | 21 8193    | 2 6624     | 0 6970     | 4 8627         | 7 8412         | .2973  |
| .7028 | 24 7074    | 2 1300     | .4570 2534 | 3 8749         | 8 1525         | .2972  |
| .7029 | 27 5960    | 1 5974     | .4569 8095 | 2 8868         | 8 4637         | .2971  |
| .7030 | .5330 4851 | .3461 0645 | .4569 3654 | .7111 8985     | .9548 7748     | .2970  |
| .7031 | 33 3746    | .3460 5313 | 8 9210     | .7110 9099     | 9 0858         | . 2969 |
| .7032 | 36 2646    | .3459 9978 | 8 4763     | .7109 9210     | 9 3966         | . 2968 |
| .7033 | 39 1550    | 9 4641     | 8 0314     | 8 9318         | .9549 7074     | . 2967 |
| .7034 | 42 0458    | 8 9300     | 7 5862     | 7 9423         | .9550 0180     | . 2966 |
| .7035 | 44 9371    | 8 3957     | 7 1408     | 6 9526         | 0 3285         | . 2965 |
| .7036 | 47 8288    | 7 8610     | 6 6951     | 5 9626         | 0 6389         | . 2964 |
| .7037 | 50 7210    | 7 3261     | 6 2491     | 4 9723         | 0 9492         | .2963  |
| .7038 | 53 6137    | 6 7909     | 5 8029     | 3 9817         | 1 2594         | .2962  |
| .7039 | 56 5068    | 6 2554     | 5 3564     | 2 9908         | 1 5695         | .2961  |
| .7040 | .5359 4003 | .3455 7196 | .4564 9096 | .7101 9997     | .9551 8794     | .2960  |
| .7041 | 62 2943    | 5 1835     | 4 4626     | 1 0083         | 2 1892         | .2959  |
| .7042 | 65 1887    | 4 6471     | 4 0153     | .7100 0166     | 2 4989         | .2958  |
| .7043 | 68 0836    | 4 1104     | 3 5678     | .7099 0247     | 2 8085         | .2957  |
| .7044 | 70 9789    | 3 5735     | 3 1200     | 8 0324         | 3 1180         | .2956  |
| .7045 | 73 8747    | 3 0362     | 2 6719     | 7 0399         | 3 4274         | .2955  |
| .7046 | 76 7709    | 2 4987     | 2 2236     | 6 0471         | 3 7367         | .2954  |
| .7047 | 79 6676    | 1 9609     | 1 7750     | 5 0540         | 4 0458         | .2953  |
| .7048 | 82 5647    | 1 4228     | 1 3261     | 4 0606         | 4 3548         | .2952  |
| .7049 | 85 4623    | 0 8844     | 0 8770     | 3 0670         | 4 6637         | .2951  |
| .7050 | .5388 3603 | .3450 3457 | .4560 4276 | .7092 0730     | .9554 9725     | .2950  |

 $E^{-1}_{=}$   $E^{1}_{=}.0000,0001$  .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| p              | x                          | z                        | √pq              | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$               | q                |
|----------------|----------------------------|--------------------------|------------------|--------------------------|------------------------------|------------------|
| .7050          | .5388 3603                 | .3450 3457               | .4560 4276       | .7092 0730               | .9554 9725                   | .2950            |
| .7051          | 91 2588                    | .3449 8067               | .4559 9780       | 1 0788                   | 5 2812                       | .2949            |
| .7052          | 94 1577                    | 9 2674                   | 9 5280           | .7090 0843               | 5 5898                       | .2948            |
| .7053          | 97 0571                    | 8 7279                   | 9 0779           | .7089 0896               | 5 8982                       | . 2947           |
| .7054          | .5399 9570                 | 8 1880                   | 8 6274           | 8 0945                   | 6 2066                       | .2946            |
| .7055          | .5402 8573                 | 7 6479                   | 8 1767           | 7 0992                   | 6 5148                       | . 2945           |
| .7056          | 05 7580                    | 7 1075                   | 7 7257           | 6 1036                   | 6 8229                       | . 2944           |
| .7057          | 08 6592                    | 6 5667                   | 7 2745           | 5 1077                   | 7 1309                       | . 2943           |
| .7058          | 11 5609                    | 6 0257                   | 6 8230           | 4 1115                   | 7 4388                       | . 2942           |
| .7059          | 14 4630                    | 5 4844                   | 6 3713           | 3 1151                   | 7 7465                       | . 2941           |
| .7060          | .5417 3656                 | .3444 9428               | .4555 9192       | .7082 1183               | .9558 0542                   | .2940            |
| .7061          | 20 2686                    | 4 4009                   | 5 4669           | 1 1213                   | 8 3617                       | .2939            |
| .7062<br>.7063 | 23 1721                    | 3 8588                   | 5 0144           | .7080 1240               | 8 6692                       | . 2938           |
| i i            | 26 0761                    | 3 3163                   | 4 5616           | .7079 1264               | 8 9765                       | . 2937           |
| .7064          | 28 9805                    | 2 7736                   | 4 1085           | 8 1286                   | 9 2837                       | . 2936           |
| .7065<br>.7066 | 31 8853<br>34 <b>7</b> 906 | 2 2305<br>1 6872         | 3 6551<br>3 2015 | 7 1304<br>6 1320         | 9 5907<br>.9559 8977         | . 2935<br>. 2934 |
| 1              |                            |                          |                  |                          |                              |                  |
| .7067<br>.7068 | 37 6964<br>40 6027         | 1 1436<br>0 5996         | 2 7476<br>2 2935 | 5 1333<br>4 1343         | .9560 <b>2</b> 045<br>0 5113 | .2933            |
| .7069          | 43 5094                    | .3440 0554               | 1 8391           | 3 1350                   | 0 8179                       | .2932<br>.2931   |
| .7070          | .5446 4165                 | .3439 5109               | .4551 3844       | .7072 1355               | .9561 1244                   | .2930            |
| .7071          | 49 3241                    | 8 9662                   | 0 9295           | 1 1356                   | 1 4308                       | . 2929           |
| 7072           | 52 2322                    | 8 4211                   | 0 4743           | .7070 1355               | 1 7371                       | .2928            |
| .7073          | 55 1408                    | 7 8757                   | .4550 0188       | .7069 1351               | 2 0432                       | . 2927           |
| .7074          | 58 0498                    | 7 3301                   | .4549 5631       | 8 1344                   | 2 3493                       | . 2926           |
| .7075          | 60 9592                    | 6 7841                   | 9 1071           | 7 1334                   | 2 6552                       | . 2925           |
| .7076          | 63 8691                    | 6 2379                   | 8 6508           | 6 1322                   | 2 9610                       | . 2924           |
| .7077          | 66 7795                    | 5 6913                   | 8 1943           | 5 1306                   | 3 2668                       | . 2923           |
| .7078<br>.7079 | 69 6904<br>72 6017         | 5 1445<br>4 5974         | 7 7375<br>7 2804 | 4 1288<br>3 1267         | 3 5723<br>3 8778             | . 2922           |
|                |                            | ļ                        |                  |                          |                              |                  |
| .7080          | .5475 5135                 | .3434 0500               | .4546 8231       | .7062 1243               | .9564 1832                   | .2920            |
| .7081          | <b>7</b> 8 4258            | 3 5023                   | 6 3655           | 1 1217                   | 4 4884                       | .2919            |
| .7082<br>.7083 | 81 3385<br>84 2517         | 2 9543<br>2 4060         | 5 9076<br>5 4495 | .7060 1187<br>.7059 1155 | 4 <b>7</b> 936<br>5 0986     | .2918<br>.2917   |
| 1              |                            |                          |                  |                          |                              | ľ                |
| .7084          | 87 1653                    | 1 8574                   | 4 9911           | 8 1119                   | 5 4035                       | .2916            |
| .7085          | 90 0794<br>92 9940         | 1 3086<br>0 7594         | 4 5324<br>4 0735 | 6 1040                   | 5 7083<br>6 0130             | .2915            |
| 1              | 95 9091                    |                          | ľ                | 5 0996                   |                              | l                |
| .7087<br>.7088 | .5498 8246                 | .3430 2100<br>.3429 6602 | 3 6143<br>3 1549 | 4 0950                   | 6 3175<br>6 6220             | .2913            |
| .7089          | .5501 7406                 | 9 1102                   | 2 6951           | 3 0900                   | 6 9263                       | .2911            |
| .7090          | .5504 6570                 | .3428 5599               | .4542 2351       | .7052 0848               | .9567 2305                   | .2910            |
| .7091          | 07 5739                    | 8 0093                   | 1 7749           | 1 0793                   | 7 5346                       | .2909            |
| .7092          | 10 4913                    | 7 4584                   | 1 3143           | .7050 0735               | 7 8386                       | .2908            |
| .7093          | 13 4091                    | 6 9072                   | 0 8536           | .7049 0674               | 8 1425                       | .2907            |
| .7094          | 16 3274                    | 6 3557                   | .4540 3925       | 8 0610                   | 8 4463                       | .2906            |
| .7095          | 19 2462                    | 5 8039                   | .4539 9312       | 7 0543                   | 8 7499                       | .2905            |
| .7096          | 22 1655                    | 5 2519                   | 9 4696           | 6 0474                   | 9 0535                       | .2904            |
| .7097          | 25 0852                    | 4 6995                   | 9 0077           | 5 0402                   | 9 3569                       | .2903            |
| .7098          | 28 0054                    | 4 1468                   | 8 5456           | 4 0327                   | 9 6602                       | .2902            |
| .7099          | 30 9261                    | 3 5939                   | 8 0832           | 3 0248                   | .9569 9634                   | .2901            |
| .7100          | .5533 8472                 | .3423 0407               | .4537 6205       | .7042 0168               | .9570 2665                   | .2900            |

E-1 = E1 - 0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| P              | x                        | z                        | √pq                      | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q                |
|----------------|--------------------------|--------------------------|--------------------------|----------------------|------------------|------------------|
| .7100          | .5533 8472               | .3423 0407               | .4537 6205               | .7042 0168           | .9570 2665       | .2900            |
| .7101          | 36 7688                  | 2 4871                   | 7 1576                   | .7041 0084           | 0 5694           | .2899            |
| .7102          | 39 6909                  | 1 9333                   | 6 6944                   | .7039 9997           | 0 8723           | . 2898           |
| .7103          | 42 6135                  | 1 3792                   | 6 2309                   | 8 9908               | 1 1750           | .2897            |
| .7104          | 45 5365                  | 0 8248                   | 5 7672                   | 7 9815               | 1 4776           | .2896            |
| .7105<br>.7106 | 48 4600<br>51 3840       | .3420 2701<br>.3419 7151 | 5 3032<br>4 8389         | 6 9720<br>5 9622     | 1 7801<br>2 0825 | . 2895<br>. 2894 |
| .7107          |                          |                          | 1                        |                      | 2 3848           | .2893            |
| .7107          | 54 3085<br>57 2334       | 9 1598<br>8 6042         | 4 3744<br>3 9096         | 4 9521<br>3 9417     | 2 6870           | .2892            |
| .7109          | 60 1588                  | 8 0484                   | 3 4445                   | 2 9310               | 2 9890           | . 2891           |
| .7110          | .5563 0847               | .3417 4922               | .4532 9792               | .7031 9201           | .9573 2910       | .2890            |
| .7111          | 66 0111                  | 6 9357                   | 2 5135                   | .7030 9088           | 3 5928           | .2889            |
| .7112          | 68 9379                  | 6 3790                   | 2 0477                   | .7029 8973           | 3 8945           | .2888            |
| .7113          | 71 8652                  | 5 8219                   | 1 5815                   | 8 8855               | 4 1961           | . 2887           |
| .7114<br>.7115 | 74 7930<br>77 7213       | 5 2646<br>4 7070         | 1 1151<br>0 6484         | 7 8734<br>6 8610     | 4 4976<br>4 7990 | . 2886<br>. 2885 |
| .7116          | 80 6500                  | 4 1491                   | .4530 1815               | 5 8483               | 5 1002           | . 2884           |
| .7117          | 83 5792                  | 3 5909                   | .4529 7142               | 4 8353               | 5 4013           | .2883            |
| .7118          | 86 5089                  | 3 0324                   | 9 2467                   | 3 8220               | 5 7024           | . 2882           |
| .7119          | 89 4391                  | 2 4736                   | 8 7790                   | 2 8085               | 6 0033           | . 2881           |
| .7120          | .5592 3698               | .3411 9145               | .4528 3109               | .7021 7946           | .9576 3041       | .2880            |
| .7121          | 95 3009                  | 1 3551                   | 7 8426                   | .7020 7805           | 6 6048           | .2879<br>.2878   |
| .7122<br>.7123 | .5598 2326<br>.5601 1647 | 0 7954<br>.3410 2354     | 7 3741<br>6 9052         | .7019 7661<br>8 7514 | 6 9053<br>7 2058 | .2877            |
| .7124          | 04 0973                  | .3409 6752               | 6 4361                   | 7 7364               | 7 5061           | . 2876           |
| .7125          | 07 0303                  | 9 1146                   | 5 9667                   | 6 7211               | 7 8064           | . 2875           |
| .7126          | 09 9639                  | 8 5538                   | 5 4971                   | 5 <b>7</b> 055       | 8 1065           | .2874            |
| .7127          | 12 8979                  | 7 9926                   | 5 0272                   | 4 6897               | 8 4065           | .2873            |
| .7128<br>.7129 | 15 8324<br>18 7674       | 7 4312<br>6 8695         | 4 5570<br>4 0865         | 3 6735<br>2 6571     | 8 7064<br>9 0062 | .2872<br>.2871   |
| .7130          | .5621 7029               | .3406 3074               | .4523 6158               | .7011 6403           | .9579 3058       | .2870            |
| .7131          | 24 6389                  | 5 7451                   | 3 1448                   | .7010 6233           | 9 6054           | .2869            |
| .7132          | 27 5753                  | 5 1825                   | 2 6735                   | .7009 6060           | .9579 9048       | .2868            |
| .7133          | 30 5123                  | 4 6196                   | 2 2020                   | 8 5884               | .9580 2041       | . 2867           |
| .7134          | 33 4497                  | 4 0564                   | 1 7302                   | 7 5705               | 0 5033           | .2866            |
| .7135<br>.7136 | 36 3876<br>39 3260       | 3 4929<br>2 9291         | 1 2581<br>0 7858         | 6 5523<br>5 5338     | 0 8024<br>1 1014 | .2865<br>.2864   |
| .7137          |                          |                          | }                        | 4 5150               | 1 4003           | .2863            |
| .7138          | 42 2649<br>45 2043       | 2 3650<br>1 8007         | .4520 3132<br>.4519 8403 | 3 4960               | 1 6990           | .2862            |
| .7139          | 48 1441                  | 1 2360                   | 9 3671                   | 2 4766               | 1 9977           | .2861            |
| .7140          | .5651 0845               | .3400 6710               | .4518 8937               | .7001 4570           | .9582 2962       | .2860            |
| .7141          | 54 0253                  | .3400 1058               | 8 4200                   | .7000 4371           | 2 5946           | .2859            |
| .7142<br>.7143 | 56 9667<br>59 9085       | .3399 5402<br>8 9744     | 7 9460<br>7 4717         | .6999 4168<br>8 3963 | 2 8929<br>3 1911 | .2858<br>.2857   |
| 1              |                          | ŀ                        |                          | i                    |                  |                  |
| .7144<br>.7145 | 62 8508<br>65 7936       | 8 4083<br>7 8418         | 7 0972<br>6 5224         | 7 3755<br>6 3544     | 3 4891<br>3 7871 | .2856<br>.2855   |
| .7146          | 68 7369                  | 7 2751                   | 6 0474                   | 5 3330               | 4 0849           | .2854            |
| .7147          | 71 6807                  | 6 7081                   | 5 5721                   | 4 3113               | 4 3827           | .2853            |
| .7148          | 74 6250                  | 6 1408                   | 5 0965                   | 3 2894               | 4 6803           | .2852            |
| .7149          | 77 5697                  | 5 5732                   | 4 6206                   | 2 2671               | 4 9778           | .2851            |
| .7150          | .5680 5150               | .3395 0053               | .4514 1444               | .6991 2445           | .9585 2752       | .2850            |

ε<sup>-11</sup>= ε<sup>11</sup>=.0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.7150 .2850

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|------------|----------------|----------------|--------|
| .7150 | .5680 5150 | .3395 0053 | .4514 1444 | .6991 2445     | .9585 2752     | .2850  |
| .7151 | 83 4607    | 4 4371     | 3 6680     | .6990 2217     | 5 5724         | .2849  |
| .7152 | 86 4070    | 3 8686     | 3 1913     | .6989 1985     | 5 8696         | .2848  |
| .7153 | 89 3537    | 3 2998     | 2 7144     | 8 1751         | 6 1666         | .2847  |
| .7154 | 92 3009    | 2 7307     | 2 2371     | 7 1514         | 6 4636         | .2846  |
| .7155 | 95 2487    | 2 1613     | 1 7596     | 6 1273         | 6 7604         | .2845  |
| .7156 | .5698 1969 | 1 5916     | 1 2819     | 5 1030         | 7 0571         | .2844  |
| .7157 | .5701 1456 | 1 0217     | 0 8038     | 4 0784         | 7 3537         | .2843  |
| .7158 | 04 0948    | .3390 4514 | .4510 3255 | 3 0535         | 7 6502         | .2842  |
| .7159 | 07 0445    | .3389 8809 | .4509 8469 | 2 0283         | 7 9465         | .2841  |
| .7160 | .5709 9947 | .3389 3100 | .4509 3680 | .6981 0028     | .9588 2428     | .2840  |
| .7161 | 12 9454    | 8 7389     | 8 8889     | .6979 9770     | 8 5389         | .2839  |
| .7162 | 15 8966    | 8 1674     | 8 4095     | 8 9509         | 8 8350         | .2838  |
| .7163 | 18 8483    | 7 5957     | 7 9298     | 7 9245         | 9 1309         | .2837  |
| .7164 | 21 8005    | 7 0236     | 7 4498     | 6 8979         | 9 4267         | .2836  |
| .7165 | 24 7532    | 6 4513     | 6 9696     | 5 8709         | .9589 7224     | .2835  |
| .7166 | 27 7064    | 5 8787     | 6 4891     | 4 8437         | .9590 0179     | .2834  |
| .7167 | 30 6601    | 5 3058     | 6 0083     | 3 8161         | 0 3134         | .2833  |
| .7168 | 33 6143    | 4 7326     | 5 5273     | 2 7883         | 0 6087         | .2832  |
| .7169 | 36 5690    | 4 1590     | 5 0459     | 1 7601         | 0 9040         | .2831  |
| .7170 | .5739 5242 | .3383 5852 | .4504 5644 | .6970 7317     | .9591 1991     | .2830  |
| .7171 | 42 4799    | 3 0111     | 4 0825     | .6969 7029     | 1 4941         | . 2829 |
| .7172 | 45 4361    | 2 4367     | 3 6003     | 8 6739         | 1 7890         | . 2828 |
| .7173 | 48 3928    | 1 8621     | 3 1179     | 7 6446         | 2 0838         | . 2827 |
| .7174 | 51 3500    | 1 2871     | 2 6352     | 6 6150         | 2 3784         | .2826  |
| .7175 | 54 3077    | 0 7118     | 2 1523     | 5 5850         | 2 6730         | .2825  |
| .7176 | 57 2659    | .3380 1362 | 1 6690     | 4 5548         | 2 9674         | .2824  |
| .7177 | 60 2246    | .3379 5603 | 1 1855     | 3 5243         | 3 2617         | .2823  |
| .7178 | 63 1839    | 8 9842     | 0 7017     | 2 4935         | 3 5560         | .2822  |
| .7179 | 66 1436    | 8 4077     | .4500 2177 | 1 4624         | 3 8501         | .2821  |
| .7180 | .5769 1038 | .3377 8309 | .4499 7333 | .6960 4310     | .9594 1440     | .2820  |
| .7181 | 72 0645    | 7 2539     | 9 2487     | .6959 3993     | 4 4379         | .2819  |
| .7182 | 75 0258    | 6 6765     | 8 7638     | 8 3673         | 4 7317         | .2818  |
| .7183 | 77 9875    | 6 0989     | 8 2787     | 7 3351         | 5 0253         | .2817  |
| .7184 | 80 9497    | 5 5209     | 7 7932     | 6 3025         | 5 3189         | .2816  |
| .7185 | 83 9125    | 4 9427     | 7 3075     | 5 2696         | 5 6123         | .2815  |
| .7186 | 86 8758    | 4 3641     | 6 8215     | 4 2364         | 5 9056         | .2814  |
| .7187 | 89 8395    | 3 7853     | 6 3353     | 3 2029         | 6 1988         | .2813  |
| .7188 | 92 8038    | 3 2062     | 5 8488     | 2 1692         | 6 4919         | .2812  |
| .7189 | 95 7686    | 2 6267     | 5 3619     | 1 1351         | 6 7848         | .2811  |
| .7190 | .5798 7339 | .3372 0470 | .4494 8749 | .6950 1007     | .9597 0777     | .2810  |
| .7191 | .5801 6997 | 1 4670     | 4 3875     | .6949 0661     | 7 3704         | .2809  |
| .7192 | 04 6660    | 0 8867     | 3 8999     | 8 0311         | 7 6630         | .2808  |
| .7193 | 07 6329    | .3370 3061 | 3 4120     | 6 9958         | 7 9556         | .2807  |
| .7194 | 10 6002    | .3369 7252 | 2 9238     | 5 9603         | 8 2480         | .2806  |
| .7195 | 13 5681    | 9 1439     | 2 4353     | 4 9244         | 8 5403         | .2805  |
| .7196 | 16 5365    | 8 5624     | 1 9466     | 3 8882         | 8 8324         | .2804  |
| .7197 | 19 5054    | 7 9806     | 1 4576     | 2 8518         | 9 1245         | .2803  |
| .7198 | 22 4748    | 7 3985     | 0 9683     | 1 8150         | 9 4164         | .2802  |
| .7199 | 25 4447    | 6 8161     | .4490 4787 | .6940 7780     | .9599 7083     | .2801  |
| .7200 | .5828 4151 | .3366 2334 | .4489 9889 | .6939 7406     | .9600 0000     | .2800  |

E-11 E11 0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

TABLE I .7200 .2800

| p     | x          | Z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .7200 | .5828 4151 | .3366 2334 | .4489 9889 | .6939 7406     | .9600 0000     | .2800 |
| .7201 | 31 3860    | 5 6505     | 9 4987     | 8 7030         | 0 2916         | .2799 |
| .7202 | 34 3575    | 5 0672     | 9 0084     | 7 6650         | 0 5831         | .2798 |
| .7203 | 37 3295    | 4 4836     | 8 5177     | 6 6268         | 0 8745         | .2797 |
| .7204 | 40 3019    | 3 8997     | 8 0267     | 5 5882         | 1 1658         | .2796 |
| .7205 | 43 2749    | 3 3155     | 7 5355     | 4 5494         | 1 4569         | .2795 |
| .7206 | 46 2485    | 2 7311     | 7 0440     | 3 5102         | 1 7480         | .2794 |
| .7207 | 49 2225    | 2 1463     | 6 5522     | 2 4708         | 2 0389         | .2793 |
| .7208 | 52 1970    | 1 5612     | 6 0602     | 1 4310         | 2 3297         | .2792 |
| .7209 | 55 1721    | 0 9758     | 5 5679     | .6930 3910     | 2 6204         | .2791 |
| .7210 | .5858 1477 | .3360 3902 | .4485 0753 | .6929 3506     | .9602 9110     | .2790 |
| .7211 | 61 1238    | .3359 8042 | 4 5824     | 8 3100         | 3 2015         | .2789 |
| .7212 | 64 1004    | 9 2179     | 4 0892     | 7 2690         | 3 4919         | .2788 |
| .7213 | 67 0776    | 8 6314     | 3 5958     | 6 2278         | 3 7821         | .2787 |
| .7214 | 70 0552    | 8 0445     | 3 1021     | 5 1862         | 4 0723         | .2786 |
| .7215 | 73 0334    | 7 4574     | 2 6081     | 4 1444         | 4 3623         | .2785 |
| .7216 | 76 0121    | 6 8699     | 2 1138     | 3 1022         | 4 6522         | .2784 |
| .7217 | 78 9913    | 6 2822     | 1 6192     | 2 0597         | 4 9420         | .2783 |
| .7218 | 81 9710    | 5 6941     | 1 1244     | .6921 0170     | 5 2317         | .2782 |
| .7219 | 84 9513    | 5 1058     | 0 6293     | .6919 9739     | 5 5213         | .2781 |
| .7220 | .5887 9321 | .3354 5171 | .4480 1339 | .6918 9306     | .9605 8107     | .2780 |
| .7221 | 90 9134    | 3 9282     | .4479 6383 | 7 8869         | 6 1001         | .2779 |
| .7222 | 93 8953    | 3 3390     | 9 1423     | 6 8429         | 6 3893         | .2778 |
| .7223 | 96 8776    | 2 7494     | 8 6461     | 5 7987         | 6 6785         | .2777 |
| .7224 | .5899 8605 | 2 1596     | 8 1496     | 4 7541         | 6 9675         | .2776 |
| .7225 | .5902 8439 | 1 5694     | 7 6528     | 3 7092         | 7 2564         | .2775 |
| .7226 | 05 8279    | 0 9790     | 7 1558     | 2 6640         | 7 5452         | .2774 |
| .7227 | 08 8123    | .3350 3883 | 6 6585     | 1 6186         | 7 8338         | .2773 |
| .7228 | 11 7973    | .3349 7972 | 6 1609     | .6910 5728     | 8 1224         | .2772 |
| .7229 | 14 7829    | 9 2059     | 5 6630     | .6909 5267     | 8 4108         | .2771 |
| .7230 | .5917 7689 | .3348 6143 | .4475 1648 | .6908 4803     | .9608 6992     | .2770 |
| .7231 | 20 7555    | 8 0224     | 4 6664     | 7 4336         | 8 9874         | .2769 |
| .7232 | 23 7426    | 7 4301     | 4 1676     | 6 3866         | 9 2755         | .2768 |
| .7233 | 26 7302    | 6 8376     | 3 6686     | 5 3393         | 9 5635         | .2767 |
| .7234 | 29 7184    | 6 2448     | 3 1693     | 4 2917         | .9609 8514     | .2766 |
| .7235 | 32 7071    | 5 6517     | 2 6698     | 3 2438         | .9610 1392     | .2765 |
| .7236 | 35 6963    | 5 0583     | 2 1699     | 2 1956         | 0 4268         | .2764 |
| .7237 | 38 6860    | 4 4645     | 1 6698     | 1 1471         | 0 7144         | .2763 |
| .7238 | 41 6763    | 3 8705     | 1 1694     | .6900 0983     | 1 0018         | .2762 |
| .7239 | 44 6672    | 3 2762     | 0 6687     | .6899 0491     | 1 2891         | .2761 |
| .7240 | .5947 6585 | .3342 6816 | .4470 1678 | .6897 9997     | .9611 5764     | .2760 |
| .7241 | 50 6504    | 2 0867     | .4469 6665 | 6 9500         | 1 8635         | .2759 |
| .7242 | 53 6428    | 1 4915     | 9 1650     | 5 8999         | 2 1504         | .2758 |
| .7243 | 56 6357    | 0 8959     | 8 6632     | 4 8496         | 2 4373         | .2757 |
| .7244 | 59 6292    | .3340 3001 | 8 1611     | 3 7990         | 2 7241         | .2756 |
| .7245 | 62 6232    | .3339 7040 | 7 6588     | 2 7480         | 3 0107         | .2755 |
| .7246 | 65 6177    | 9 1076     | 7 1561     | 1 6967         | 3 2972         | .2754 |
| .7247 | 68 6128    | 8 5109     | 6 6532     | .6890 6452     | 3 5837         | .2753 |
| .7248 | 71 6085    | 7 9139     | 6 1500     | .6889 5933     | 3 8700         | .2752 |
| .7249 | 74 6046    | 7 3166     | 5 6465     | 8 5411         | 4 1562         | .2751 |
| .7250 | .5977 6013 | .3336 7190 | .4465 1428 | .6887 4887     | .9614 4423     | .2750 |

E<sup>-11</sup>= E<sup>11</sup>=.0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

| .7250 |            |            |            |                |                | .275  |
|-------|------------|------------|------------|----------------|----------------|-------|
| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
| .7250 | .5977 6013 | .3336 7190 | .4465 1428 | .6887 4887     | .9614 4423     | .2750 |
| .7251 | 80 5985    | 6 1210     | 4 6387     | 6 4359         | 4 7282         | .2749 |
| .7252 | 83 5963    | 5 5228     | 4 1344     | 5 3828         | 5 0141         | .2748 |
| .7253 | 86 5946    | 4 9243     | 3 6298     | 4 3294         | 5 2998         | .2747 |
| .7254 | 89 5934    | 4 3255     | 3 1249     | 3 2757         | 5 5855         | .2746 |
| .7255 | 92 5928    | 3 7264     | 2 6197     | 2 2217         | 5 8710         | .2745 |
| .7256 | 95 5927    | 3 1270     | 2 1143     | 1 1673         | 6 1564         | .2744 |
| .7257 | .5998 5931 | 2 5273     | 1 6086     | .6880 1127     | 6 4417         | .2743 |
| .7258 | .6001 5941 | 1 9273     | 1 1026     | .6879 0578     | 6 7269         | .2742 |
| .7259 | 04 5956    | 1 3270     | 0 5963     | 8 0025         | 7 0120         | .2741 |
| .7260 | .6007 5977 | .3330 7264 | .4460 0897 | .6876 9470     | .9617 2969     | .2740 |
| .7261 | 10 6003    | .3330 1255 | .4459 5828 | 5 8911         | 7 5818         | .2739 |
| .7262 | 13 6035    | .3329 5242 | 9 0757     | 4 8350         | 7 8665         | .2738 |
| .7263 | 16 6072    | 8 9227     | 8 5683     | 3 7785         | 8 1511         | .2737 |
| .7264 | 19 6115    | 8 3209     | 8 0606     | 2 7217         | 8 4356         | .2736 |
| .7265 | 22 6163    | 7 7188     | 7 5526     | 1 6646         | 8 7200         | .2735 |
| .7266 | 25 6216    | 7 1164     | 7 0443     | .6870 6073     | 9 0043         | .2734 |
| .7267 | 28 6275    | 6 5137     | 6 5358     | .6869 5495     | 9 2885         | .2733 |
| .7268 | 31 6339    | 5 9107     | 6 0269     | 8 4915         | 9 5725         | .2732 |
| .7269 | 34 6409    | 5 3074     | 5 5178     | 7 4332         | .9619 8565     | .2731 |
| .7270 | .6037 6484 | .3324 7037 | .4455 0084 | .6866 3746     | .9620 1403     | .2730 |
| .7271 | 40 6565    | 4 0998     | 4 4987     | 5 3157         | 0 4241         | .2729 |
| .7272 | 43 6651    | 3 4956     | 3 9888     | 4 2564         | 0 7077         | .2728 |
| .7273 | 46 6742    | 2 8911     | 3 4785     | 3 1968         | 0 9912         | .2727 |
| .7274 | 49 6839    | 2 2863     | 2 9680     | 2 1370         | 1 2746         | .2726 |
| .7275 | 52 6941    | 1 6812     | 2 4572     | 1 0768         | 1 5578         | .2725 |
| .7276 | 55 7049    | 1 0757     | 1 9461     | .6860 0163     | 1 8410         | .2724 |
| .7277 | 58 7163    | .3320 4700 | 1 4347     | .6858 9555     | 2 1240         | .2723 |
| .7278 | 61 7282    | .3319 8640 | 0 9231     | 7 8944         | 2 4070         | .2722 |
| .7279 | 64 7406    | 9 2577     | .4450 4111 | 6 8330         | 2 6898         | .2721 |
| .7280 | .6067 7536 | .3318 6510 | .4449 8989 | .6855 7713     | .9622 9725     | .2720 |
| .7281 | 70 7672    | 8 0441     | 9 3864     | 4 7093         | 3 2551         | .2719 |
| .7282 | 73 7813    | 7 4369     | 8 8736     | 3 6469         | 3 5376         | .2718 |
| .7283 | 76 7959    | 6 8294     | 8 3605     | 2 5843         | 3 8200         | .2717 |
| .7284 | 79 8111    | 6 2215     | 7 8471     | 1 5213         | 4 1022         | .2716 |
| .7285 | 82 8269    | 5 6134     | 7 3335     | .6850 4580     | 4 3844         | .2715 |
| .7286 | 85 8432    | 5 0050     | 6 8195     | .6849 3944     | 4 6664         | .2714 |
| .7287 | 88 8601    | 4 3962     | 6 3053     | 8 3305         | 4 9484         | .2713 |
| .7288 | 91 8775    | 3 7872     | 5 7908     | 7 2663         | 5 2302         | .2712 |
| .7289 | 94 8955    | 3 1779     | 5 2760     | 6 2018         | 5 5119         | .2711 |
| .7290 | .6097 9140 | .3312 5682 | .4444 7610 | .6845 1370     | .9625 7935     | .2710 |
| .7291 | .6100 9331 | 1 9583     | 4 2456     | 4 0718         | 6 0750         | .2709 |
| .7292 | 03 9527    | 1 3480     | 3 7300     | 3 0064         | 6 3563         | .2708 |
| .7293 | 06 9729    | 0 7375     | 3 2140     | 1 9406         | 6 6376         | .2707 |
| .7294 | 09 9937    | .3310 1266 | 2 6978     | .6840 8745     | 6 9187         | .2706 |
| .7295 | 13 0150    | .3309 5155 | 2 1813     | .6839 8081     | 7 1997         | .2705 |
| .7296 | 16 0368    | 8 9040     | 1 6646     | 8 7414         | 7 4807         | .2704 |
| .7297 | 19 0593    | 8 2923     | 1 1475     | 7 6744         | 7 7615         | .2703 |
| .7298 | 22 0823    | 7 6802     | 0 6301     | 6 6071         | 8 0422         | .2702 |
| .7299 | 25 1058    | 7 0679     | .4440 1125 | 5 5394         | 8 3228         | .2701 |
| .7300 | .6128 1299 | .3306 4552 | .4439 5946 | .6834 4714     | .9628 6032     | .2700 |

E-IL EIL-0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.2700

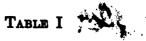
| P              | x                  | z                    | √pq                  | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q              |
|----------------|--------------------|----------------------|----------------------|--------------------------|----------------------|----------------|
| .7300          | .6128 1299         | .3306 4552           | .4439 5946           | .6834 4714               | .9628 6032           | .2700          |
|                |                    |                      | 9 0764               |                          |                      | .2699          |
| .7301<br>.7302 | 31 1546<br>34 1798 | 5 8422<br>5 2290     | 8 5579               | 3 4032<br>2 3346         | 8 8836<br>9 1638     | .2698          |
| .7303          | 37 2056            | 4 6154               | 8 0391               | 1 2657                   | 9 4440               | .2697          |
| i i            | 40 2319            | 4 0015               | 7 5200               | .6830 1965               | .9629 7240           | .2696          |
| .7304<br>.7305 | 43 2589            | 3 3874               | 7 0007               | .6829 1270               | .9630 0039           | .2695          |
| 7306           | 46 2863            | 2 7729               | 6 4810               | 8 0571                   | 0 2837               | .2694          |
| .7307          | 49 3144            | 2 1581               | 5 9611               | 6 9870                   | 0 5634               | .2693          |
| 7308           | 52 3430            | 1 5430               | 5 4409               | 5 9165                   | 0 8430               | .2692          |
| .7309          | 55 3722            | 0 9276               | 4 9204               | 4 8457                   | 1 1224               | .2691          |
| .7310          | .6158 4019         | .3300 3119           | .4434 3996           | .6823 7746               | .9631 4018           | .2690          |
| .7311          | 61 4322            | .3299 6959           | 3 8786               | 2 7032                   | 1 6810               | .2689          |
| 7312           | 64 4631            | 9 0797               | 3 3572               | 1 6315                   | 1 9601               | .2688          |
| 7313           | 67 4945            | 8 4631               | 2 8355               | .6820 5594               | 2 2391               | .2687          |
| .7314          | 70 5265            | 7 8462               | 2 3136               | .6819 4871               | 2 5181               | . 2686         |
| 7315           | 73 5591            | 7 2289               | 1 7914               | 8 4144                   | 2 7968               | . 2685         |
| .7316          | 76 5922            | 6 6114               | 1 2689               | 7 3414                   | 3 0755               | .2684          |
| .7317          | 79 6259            | 5 9936               | 0 7461               | 6 2681                   | 3 3541               | . 2683         |
| .7318          | 82 6602            | 5 3755               | .4430 2230           | 5 1945                   | 3 6325               | .2682          |
| .7319          | 85 6950            | 4 7571               | .4429 6997           | 4 1206                   | 3 9109               | . 2681         |
| .7320          | .6188 7304         | .3294 1384           | .4429 1760           | .6813 0463               | .9634 1891           | .2680          |
| .7321          | 91 7664            | 3 5194               | 8 6521               | 1 9717                   | 4 4672               | .2679          |
| .7322          | 94 8029            | 2 9000               | 8 1278               | .6810 8969               | 4 7452               | .2678          |
| .7323          | .6197 8401         | 2 2804               | 7 6033               | .6809 8217               | 5 0231               | .2677          |
| .7324          | .6200 8778         | 1 6605               | 7 0785               | 8 7461                   | 5 3009               | . 2676         |
| .7325          | 03 9160            | 1 0402               | 6 5534               | 7 6703                   | 5 5786               | .2675          |
| .7326          | 06 9549            | .3290 4197           | 6 0280               | 6 5942                   | 5 8562               | .2674          |
| .7327          | 09 9943            | .3289 7988           | 5 5023               | 5 5177                   | 6 1336               | .2673          |
| .7328          | 13 0343            | 9 1777               | 4 9764               | 4 4409                   | 6 4110               | .2672          |
| .7329          | 16 0749            | 8 5562               | 4 4501               | 3 3638                   | 6 6882               | . 2671         |
| .7330          | .6219 1160         | .3287 9345           | .4423 9236           | .6802 2864               | .9636 9653           | .2670          |
| .7331          | 22 1577            | 7 3124               | 3 3968               | 1 2086                   | 7 2423               | .2669          |
| .7332          | 25 2000            | 6 6900               | 2 8697               | .6800 1306               | 7 5192               | .2668          |
| .7333          | 28 2428            | 6 0674               | 2 3423               | .6799 0522               | 7 7960               | . 2667         |
| .7334          | 31 2863            | 5 4444               | 1 8146               | 7 9735                   | 8 0726               | .2666          |
| .7335          | 34 3303<br>37 3749 | 4 8211<br>4 1975     | 1 2866<br>0 7583     | 6 8945<br>5 8152         | 8 3492<br>8 6256     | .2665          |
| .7336          |                    | 1                    | 1                    | ļ                        | i                    |                |
| .7337          | 40 4200            | 3 5736               | .4420 2297           | 4 7355                   | 8 9020               | .2663          |
| .7338<br>.7339 | 43 4658<br>46 5121 | 2 9494<br>2 3249     | .4419 7009<br>9 1718 | 3 6556<br>2 5753         | 9 1782<br>9 4543     | .2662          |
| .7340          | .6249 5590         | .3281 7001           | .4418 6423           | .6791 4947               | .9639 7303           | .2660          |
|                |                    |                      |                      |                          |                      |                |
| .7341<br>.7342 | 52 6065<br>55 6546 | 1 0750<br>.3280 4496 | 8 1126<br>7 5826     | .6790 4138<br>.6789 3325 | .9640 0062<br>0 2819 | .2659<br>.2658 |
| .7343          | 58 7032            | .3279 8239           | 7 0523               | 8 2510                   | 0 5576               | .2657          |
| .7344          | 61 7524            | 9 1979               | 6 5217               | 8 1691                   | 0 8332               | .2656          |
| .7345          | 64 8023            | 8 5715               | 5 9908               | 6 0869                   | 1 1086               | .2655          |
| .7346          | 67 8527            | 7 9449               | 5 4597               | 5 0043                   | 1 3839               | .2654          |
| .7347          | 70 9036            | 7 3180               | 4 9282               | 3 9215                   | 1 6591               | .2653          |
| .7348          | 73 9552            | 6 6907               | 4 3964               | 2 8383                   | 1 9342               | .2652          |
| .7349          | 77 0074            | 6 0632               | 3 8644               | 1 7549                   | 2 2092               | .2651          |
| .7350          | .6280 0601         | .3275 4353           | .4413 3321           | .6780 6711               | .9642 4841           | .2650          |

 $E^{-1}$   $E^{1}$   $E^{1}$  .0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

## THE KELLEY STATISTICAL TABLES

## **ERRATA**

```
Page 6,
          Formula giving 1: for -2t, read +2t,
                           d_5
          Formula [21]: coefficient of r4: for +u read -u
Page 7,
          \sqrt{1-p^2} entry opposite p
Page 49,
                 .5581 for .8297 8370 read .8297 7370
                 .5582 for .8297 1643 read .8297 0643
                 .5583 for .8296 4914 read .8296 3914
                 .5584 for .8295 8184 read .8295 7184
                 .5585 for .8295 1452 read .8295 0452
                 .5586 for .8294 4718 read .8294 3718
                 .5587 for .8293 7983 read .8293 6983
           .6208 for .7839 7898 read .7839 6898
Page 62,
           .6209 for .7838 9978 read .7838 8978
           .7344 for .6788 1691 read .6787 1691
Page 84,
          .7874 for .6164 3241 read .6164 4241
Page 95,
Page 123, Second entry in X column: for 02 3827 read 1.4402 3827
```



| p     | x          | z          | √pq               | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|-------------------|----------------|----------------|--------|
| .7350 | .6280 0601 | .3275 4353 | .4413 3321        | .6780 6711     | .9642 4841     | .2650  |
| .7351 | 83 1134    | 4 8072     | 2 7995            | .6779 5869     | 2 7589         | .2649  |
| .7352 | 86 1673    | 4 1787     | 2 2665            | 8 5025         | 3 0335         | .2648  |
| .7353 | 89 2218    | 3 5499     | 1 7333            | 7 4177         | 3 3081         | .2647  |
| .7354 | 92 2769    | 2 9209     | 1 1998            | 6 3326         | 3 5825         | .2646  |
| .7355 | 95 3326    | 2 2915     | 0 6660            | 5 2472         | 3 8569         | .2645  |
| .7356 | .6298 3889 | 1 6618     | .4410 1320        | 4 1615         | 4 1311         | .2644  |
| .7357 | .6301 4457 | 1 0318     | .4409 5976        | 3 0754         | 4 4052         | . 2643 |
| .7358 | 04 5032    | .3270 4015 | 9 0629            | 1 9891         | 4 6792         | . 2642 |
| .7359 | 07 5612    | .3269 7709 | 8 5280            | .6770 9024     | 4 9530         | . 2641 |
| .7360 | .6310 6198 | .3269 1400 | .4407 9927        | .6769 8154     | .9645 2268     | .2640  |
| .7361 | 13 6790    | 8 5088     | 7 4572            | 8 7280         | 5 5005         | .2639  |
| .7362 | 16 7388    | 7 8773     | 6 9214            | 7 6404         | 5 7740         | .2638  |
| .7363 | 19 7992    | 7 2454     | 6 3853            | 6 5524         | 6 0474         | .2637  |
| .7364 | 22 8602    | 6 6133     | 5 8488            | 5 4641         | 6 3207         | .2636  |
| .7365 | 25 9217    | 5 9809     | 5 3121            | 4 3754         | 6 5940         | .2635  |
| .7366 | 28 9839    | 5 3481     | 4 7751            | 3 2865         | 6 8671         | .2634  |
| .7367 | 32 0467    | 4 7151     | 4 2378            | 2 1972         | 7 1400         | .2633  |
| .7368 | 35 1100    | 4 0817     | 3 7003            | 1 1076         | 7 4129         | .2632  |
| .7369 | 38 1740    | 3 4480     | 3 1624            | .6760 0177     | 7 6857         | .2631  |
| .7370 | .6341 2385 | .3262 8141 | .4402 6242        | .6758 9274     | .9647 9583     | .2630  |
| .7371 | 44 3036    | 2 1798     | 2 0858            | 7 8369         | 8 2309         | .2629  |
| .7372 | 47 3694    | 1 5452     | 1 5470            | 6 7460         | 8 5033         | .2628  |
| .7373 | 50 4357    | 0 9103     | 1 0080            | 5 6547         | 8 7756         | .2627  |
| .7374 | 53 5026    | .3260 2751 | .4400 4686        | 4 5632         | 9 0478         | .2626  |
| .7375 | 56 5701    | .3259 6396 | .4399 9290        | 3 4713         | 9 3199         | .2625  |
| .7376 | 59 6382    | 9 0038     | 9 3890            | 2 3791         | 9 5919         | .2624  |
| .7377 | 62 7070    | 8 3677     | 8 8488            | 1 2866         | .9649 8638     | .2623  |
| .7378 | 65 7763    | 7 7313     | 8 3083            | .6750 1938     | .9650 1355     | .2622  |
| .7379 | 68 8462    | 7 0945     | 7 7675            | .6749 1006     | 0 4072         | .2621  |
| .7380 | .6371 9167 | .3256 4575 | .4397 2264        | .6748 0071     | .9650 6787     | .2620  |
| .7231 | 74 9878    | 5 8201     | 6 6850            | 6 9133         | 0 9502         | .2619  |
| .7382 | 78 0596    | 5 1825     | 6 1433            | 5 8191         | 1 2215         | .2618  |
| .7383 | 81 1319    | 4 5445     | 5 6013            | 4 7247         | 1 4927         | .2617  |
| .7384 | 84 2048    | 3 9063     | 5 0590            | 3 6299         | 1 7638         | .2616  |
| .7385 | 87 2784    | 3 2677     | 4 5165            | 2 5348         | 2 0348         | .2615  |
| .7386 | 90 3525    | 2 6288     | 3 9736            | 1 4393         | 2 3056         | .2614  |
| .7387 | 93 4272    | 1 9896     | 3 4304            | .6740 3435     | 2 5764         | .2613  |
| .7388 | 96 5026    | 1 3501     | 2 8870            | .6739 2474     | 2 8470         | .2612  |
| .7389 | .6399 5785 | 0 7103     | 2 3432            | 8 1510         | 3 1176         | .2611  |
| .7390 | .6402 6551 | .3250 0702 | .4391 <b>7992</b> | .6737 0543     | .9653 3880     | .2610  |
| .7391 | 05 7323    | .3249 4298 | 1 2548            | 5 9572         | 3 6583         | .2609  |
| .7392 | 08 8100    | 8 7891     | 0 7102            | 4 8598         | 3 9285         | .2608  |
| .7393 | 11 8884    | 8 1480     | .4390 1653        | 3 7620         | 4 1986         | .2607  |
| .7394 | 14 9674    | 7 5067     | .4389 6200        | 2 6640         | 4 4886         | .2606  |
| .7395 | 18 0470    | 6 8650     | 9 0745            | 1 5656         | 4 7385         | .2605  |
| .7396 | 21 1272    | 6 2231     | 8 5287            | .6730 4668     | 5 0082         | .2604  |
| .7397 | 24 2080    | 5 5808     | 7 9826            | .6729 3678     | 5 2779         | .2603  |
| .7398 | 27 2894    | 4 9382     | 7 4362            | 8 2684         | 5 5474         | .2602  |
| .7399 | 30 3715    | 4 2954     | 6 8894            | 7 1687         | 5 8168         | .2601  |
| .7400 | .6433 4541 | .3243 6522 | .4386 3424        | .6726 0687     | .9656 0862     | .2600  |

E<sup>-1</sup>L E<sup>1</sup>L.0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.2600



| p              | x                        | z                        | √pq                  | $\sqrt{1-p^2}$               | $\sqrt{1-q^2}$           | q                |
|----------------|--------------------------|--------------------------|----------------------|------------------------------|--------------------------|------------------|
| .7400          | .6433 4541               | .3243 6522               | .4386 3424           | .6726 0687                   | .9656 0862               | .2600            |
| .7401          | 36 5374                  | 3 0087                   | 5 7951               | 4 9683                       | 6 3554                   | .2599            |
| .7402          | \$9 6212                 | 2 3649                   | 5 2475               | 3 8676                       | 6 6245                   | .2598            |
| .7403          | 42,7057                  | 1 7207                   | 4 6996               | 2 7666                       | 6 8934                   | .2597            |
| .7404<br>.7405 | 45 7998<br>*48 8765      | 1 0763<br>. 7240 4316    | 4 1515<br>3 6030     | 1 6653<br>. <b>6720</b> 5636 | 7 1623<br>7 4311         | .2596<br>.2595   |
| .7406          | 51 9628                  | 3239 7865                | 3 0542               | .6719 4616                   | 7 6997                   | .2594            |
| .7407          | 55 0497                  | 9 1412                   | 2 5051               | 8 3592                       | 7 9683                   | .2593            |
| .7408          | 58 1373                  | 8 4955                   | 1 9557               | 7 2566                       | 8 2367                   | . 2592           |
| .7409          | 61 2254                  | 7 8496                   | 1 4061               | 6 1536                       | 8 5050                   | . 2591           |
| .7410          | .6464 3142               | .3237 2033               | .4380 8561           | .6715 0503                   | .9658 7732               | .2590            |
| .7411          | 67 4036                  | 6 5567                   | .4380 3058           | 3 9466                       | 9 0413                   | .2589            |
| .7412<br>.7413 | 70 4936<br>73 5842       | 5 9098<br>5 2626         | .4379 7552<br>9 2044 | 2 8426<br>1 7383             | 9 3093<br>9 5772         | . 2588<br>. 2587 |
| 1              |                          | ĺ                        |                      |                              | !                        |                  |
| .7414<br>.7415 | 76 6755<br>79 7673       | 4 6151<br>3 9673         | 8 6532<br>8 1018     | .6710 6337<br>.6709 5287     | .9659 8449<br>.9660 1126 | .2586<br>.2585   |
| .7416          | 82 8598                  | 3 3191                   | 7 5500               | 8 4234                       | 0 3801                   | .2584            |
| .7417          | 85 9530                  | 2 6707                   | 6 9979               | 7 3177                       | 0 6475                   | .2583            |
| .7418          | 89 0467                  | 2 0219                   | 6 4456               | 6 2117                       | 0 9149                   | .2582            |
| .7419          | 92 1410                  | 1 3729                   | 5 8929               | 5 1054                       | 1 1821                   | .2581            |
| .7420          | .6495 2360               | .3230 7235               | .4375 3400           | .6703 9988                   | .9661 4492               | .2580            |
| .7421<br>.7422 | .6498 3316<br>.6501 4278 | .3230 0738<br>.3229 4238 | 4 7867<br>4 2332     | 2 8918<br>1 7845             | 1 7162<br>1 9830         | .2579<br>.2578   |
| .7423          | 04 5246                  | 8 7735                   | 3 6793               | .6700 6769                   | 2 2498                   | .2577            |
| .7424          | 07 6221                  | 8 1229                   | 3 1252               | .6699 5689                   | 2 5164                   | .2576            |
| .7425          | 10 7202                  | 7 4720                   | 2 5708               | 8 4606                       | 2 7830                   | .2575            |
| .7426          | 13 8189                  | 6 8208                   | 2 0160               | 7 3520                       | 3 0494                   | .2574            |
| .7427          | 16 9182                  | 6 1693                   | 1 4610               | 6 2431                       | 3 3157                   | .2573            |
| .7428<br>.7429 | 20 0182<br>23 1188       | 5 5174<br>4 8653         | 0 9056<br>.4370 3500 | 5 1338<br>4 0241             | 3 5819<br>3 8480         | .2572            |
| .7430          | .6526 2200               | .3224 2128               | .4369 7940           | .6692 9142                   | .9664 1140               | .2570            |
|                | 29 3218                  | 3 5600                   | 9 2378               | 1 8039                       | 4 3799                   | .2569            |
| .7431<br>.7432 | 32 4243                  | 2 9069                   | 8 6813               | .6690 6932                   | 4 6457                   | .2568            |
| .7433          | 35 5274                  | 2 2535                   | 8 1244               | .6689 5823                   | 4 9113                   | .2567            |
| .7434          | 38 6312                  | 1 5998                   | 7 5673               | 8 4710                       | 5 1769                   | .2566            |
| .7435          | 41 7355                  | 0 9458                   | 7 0098               | 7 3593                       | 5 4423                   | .2565            |
| .7436          | 44 8405                  | .3220 2915               | 6 4521               | 6 2474                       | 5 7076                   | .2564            |
| .7437<br>.7438 | 47 9461<br>51 0524       | .3219 6368<br>8 9819     | 5 8941<br>5 3357     | 5 1351<br>4 0224             | 5 9728<br>6 2379         | . 2563<br>. 2562 |
| .7439          | 54 1593                  | 8 3266                   | 4 7771               | 2 9095                       | 6 5029                   | .2561            |
| .7440          | .6557 2668               | .3217 6710               | .4364 2181           | .6681 7962                   | .9666 7678               | .2560            |
| .7441          | 60 3749                  | 7 0152                   | 3 6589               | .6680 6825                   | 7 0326                   | .2559            |
| .7442          | 63 4837                  | 6 3590                   | 3 0994               | .6679 5685                   | 7 2972                   | .2558            |
| .7443          | 66 5932                  | 5 7025                   | 2 5395               | 8 4542                       | 7 5618                   | .2557            |
| .7444          | 69 7032                  | 5 0457                   | 1 9794               | 7 3396                       | 7 8262                   | .2556            |
| .7445<br>.7446 | 72 8139<br>75 9252       | 4 3885<br>3 7311         | 1 4189<br>0 8582     | 6 2246<br>5 1093             | 8 0906<br>8 3548         | .2555<br>.2554   |
| i i            | 79 0372                  | 3 0733                   | .4360 2971           | i                            | 1                        | 1                |
| .7447<br>.7448 | 82 1498                  | 2 4153                   | .4359 7358           | 3 9936<br>2 8776             | 8 6189<br>8 8829         | .2553            |
| .7449          | 85 2630                  | 1 7569                   | 9 1741               | 1 7613                       | 9 1468                   | .2551            |
| .7450          | .6588 3769               | .3211 0982               | .4358 6122           | .6670 6446                   | .9669 4105               | .2550            |

 $E^{-i}$   $E^{i}$  = .0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.7450 .2550

| p              | x                  | z                    | √pq              | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$   | q                |
|----------------|--------------------|----------------------|------------------|--------------------------|------------------|------------------|
| .7450          | .6588 3769         | .3211 0982           | .4358 6122       | .6670 6446               | .9669 4105       | .2550            |
| .7451          | 91 4914            | .3210 4392           | 8 0499           | .6669 5276               | 9 6742           | .2549            |
| .7452          | 94 6066            | .3209 7799           | 7 4873           | 8 4103                   | .9669 9377       | . 2548           |
| .7453          | .6597 7224         | 9 1203               | 6 9245           | 7 2926                   | .9670 2012       | .2547            |
| .7454          | .6600 8388         | 8 4604               | 6 3613           | 6 1746                   | 0 4645           | .2546            |
| .7455<br>.7456 | 03 9559<br>07 0737 | 7 8001<br>7 1396     | 5 7979<br>5 2341 | 5 0563<br>3 9376         | 0 7277<br>0 9908 | .2545            |
|                |                    | 1                    | 1                | 1                        | 1                | .2544            |
| .7457<br>.7458 | 10 1920<br>13 3110 | 6 4787<br>5 8176     | 4 6700<br>4 1056 | 2 8185<br>1 6992         | 1 2538<br>1 5167 | .2543            |
| .7459          | 16 4307            | 5 1561               | 3 5410           | .6660 5795               | 1 7795           | .2541            |
| .7460          | .6619 5510         | .3204 4943           | .4352 9760       | .6659 4594               | .9672 0422       | .2540            |
| .7461          | 22 6719            | 3 8322               | 2 4107           | 8 3391                   | 2 3047           | .2539            |
| .7462          | 25 7935            | 3 1697               | 1 8451           | 7 2183                   | 2 5672           | .2538            |
| .7463          | 28 9158            | 2 5070               | 1 2792           | 6 0973                   | 2 8295           | .2537            |
| .7464          | 32 0386            | 1 8440               | 0 7130           | 4 9759                   | 3 0917           | .2536            |
| .7465          | 35 1621            | 1 1806               | .4350 1465       | 3 8541                   | 3 3539           | .2535            |
| .7466          | 38 2863            | .3200 5169           | .4349 5797       | 2 7321                   | 3 6159           | . 2534           |
| .7467          | 41 4111            | .3199 8529           | 9 0126           | 1 6097                   | 3 8778           | .2533            |
| .7468<br>.7569 | 44 5366<br>47 6627 | 9 1886<br>8 5240     | 8 4452<br>7 8775 | .6650 4869<br>.6649 3638 | 4 1395<br>4 4012 | .2532<br>.2531   |
| .7470          | .6650 7895         | .3197 8591           | .4347 3095       | .6648 2404               | .9674 6628       | .2530            |
| .7471          | 53 9169            | 7 1939               | 6 7412           | 7 1166                   | 4 9242           | .2529            |
| .7472          | 57 0450            | 6 5283               | 6 1726           | 5 9925                   | 5 1856           | .2528            |
| .7473          | 60 1737            | 5 8625               | 5 6036           | 4 8680                   | 5 4468           | .2527            |
| .7474          | 63 3031            | 5 1963               | 5 0344           | 3 7432                   | 5 7079           | . 2526           |
| .7475          | 66 4331            | 4 5298               | 4 4649           | 2 6181                   | 5 9689           | . 2525           |
| .7476          | 69 5638            | 3 8630               | 3 8950           | 1 4926                   | 6 2298           | . 2524           |
| .7477          | 72 6951            | 3 1959               | 3 3249           | .6640 3668               | 6 4906           | . 2523           |
| .7478<br>.7479 | 75 8271<br>78 9597 | 2 5285<br>1 8607     | 2 7544<br>2 1837 | .6639 2406<br>8 1141     | 6 7513<br>7 0119 | .2522<br>.2521   |
| .7480          | .6682 0930         | .3191 1927           | .4341 6126       | .6636 9873               | .9677 2723       | .2520            |
| .7481          | 85 2269            | .3190 5243           | 1 0412           | 5 8601                   | 7 5327           | .2519            |
| .7482          | 88 3615            | .3189 8556           | .4340 4696       | 4 7325                   | 7 7929           | .2518            |
| .7483          | 91 4968            | 9 1866               | .4339 8976       | 3 6047                   | 8 0531           | . 2517           |
| .7484          | 94 6327            | 8 5173               | 9 3253           | 2 4765                   | 8 3131           | . 2516           |
| .7485          | .6697 7693         | 7 8477               | 8 7527           | 1 3479                   | 8 5730           | .2515            |
| .7486          | .6700 9065         | 7 1778               | 8 1798           | .6630 2190               | 8 8328           | .2514            |
| .7487          | 04 0444            | 6 5075               | 7 6066           | .6629 0898               | 9 0925           | .2513            |
| .7488<br>.7489 | 07 1830<br>10 3222 | 5 8370<br>5 1661     | 7 0331<br>6 4593 | 7 9602<br>6 8302         | 9 3520<br>9 6115 | .2512<br>.2511   |
| .7490          | .6713 4621         | .3184 4949           | .4335 8851       | .6625 7000               | .9679 8709       | .2510            |
| .7491          | 16 6027            | 3 8234               | 5 3107           | 4 5693                   | .9680 1301       | .2509            |
| .7492          | 19 7439            | 3 1516               | 4 7360           | 3 4384                   | 0 3892           | . 2508           |
| .7493          | 22 8857            | 2 4794               | 4 1609           | 2 3071                   | 0 6483           | . 2507           |
| .7494          | 26 0283            | 1 8070               | 3 5856           | 1 1754                   | 0 9072           | . 2506           |
| .7495<br>.7496 | 29 1715<br>32 3154 | 1 1342<br>.3180 4612 | 3 0099<br>2 4340 | .6620 0434               | 1 1660<br>1 4247 | . 2505<br>. 2504 |
| 1 1            |                    |                      |                  | .6618 9111               | 1                |                  |
| .7497<br>.7498 | 35 4599<br>38 6051 | .3179 7878<br>9 1141 | 1 8577<br>1 2811 | 7 7784<br>6 6454         | 1 6833<br>1 9417 | . 2503<br>. 2502 |
| 7499           | 41 7510            | 8 4401               | 0 7042           | 5 5120                   | 2 2001           | .2501            |
| .7500          | .6744 8975         | .3177 7657           | .4330 1270       | .6614 3783               | .9682 4584       | .2500            |
| ii             | .077 077           | .5111 1051           | . TJJU ILIU      | .0011 7707               | .7002 7707       | . = 500          |

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.7500 .2500

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|------------|----------------|----------------|--------|
| .7500 | .6744 8975 | .3177 7657 | .4330 1270 | .6614 3783     | .9682 4584     | . 2500 |
| .7501 | 48 0447    | 7 0911     | .4329 5495 | 3 2442         | 2 7165         | .2499  |
| .7502 | 51 1926    | 6 4161     | 8 9717     | 2 1098         | 2 9745         | .2498  |
| .7503 | 54 3411    | 5 7408     | 8 3936     | .6610 9750     | 3 2325         | .2497  |
| .7504 | 57 4903    | 5 0652     | 7 8152     | .6609 8399     | 3 4903         | .2496  |
| .7505 | 60 6402    | 4 3893     | 7 2364     | 8 7045         | 3 7480         | .2495  |
| .7506 | 63 7907    | 3 7131     | 6 6574     | 7 5687         | 4 0056         | .2494  |
| .7507 | 66 9419    | 3 0366     | 6 0780     | 6 4325         | 4 2631         | .2493  |
| .7508 | 70 0938    | 2 3597     | 5 4984     | 5 2961         | 4 5204         | .2492  |
| .7509 | 73 2464    | 1 6826     | 4 9184     | 4 1592         | 4 7777         | .2491  |
| .7510 | .6776 3996 | .3171 0051 | .4324 3381 | .6603 0220     | .9685 0348     | .2490  |
| .7511 | 79 5535    | .3170 3273 | 3 7575     | 1 8845         | 5 2919         | .2489  |
| .7512 | 82 7081    | .3169 6492 | 3 1766     | .6600 7466     | 5 5488         | .2488  |
| .7513 | 85 8634    | 8 9707     | 2 5954     | .6599 6084     | 5 8056         | .2487  |
| .7514 | 89 0193    | 8 2920     | 2 0139     | 8 4698         | 6 0624         | .2486  |
| .7515 | 92 1759    | 7 6129     | 1 4321     | 7 3309         | 6 3190         | .2485  |
| .7516 | 95 3332    | 6 9336     | 0 8499     | 6 1916         | 6 5755         | .2484  |
| .7517 | .6798 4912 | 6 2539     | .4320 2675 | 5 0520         | 6 8318         | .2483  |
| .7518 | .6801 6499 | 5 5739     | .4319 6847 | 3 9120         | 7 0881         | .2482  |
| .7519 | 04 8092    | 4 8935     | 9 1016     | 2 7717         | 7 3443         | .2481  |
| .7520 | .6807 9692 | .3164 2129 | .4318 5183 | .6591 6311     | .9687 6003     | .2480  |
| .7521 | 11 1299    | 3 5320     | 7 9346     | .6590 4900     | 7 8563         | .2479  |
| .7522 | 14 2912    | 2 8507     | 7 3506     | .6589 3487     | 8 1121         | .2478  |
| .7523 | 17 4533    | 2 1691     | 6 7663     | 8 2070         | 8 3678         | .2477  |
| .7524 | 20 6160    | 1 4872     | 6 1816     | 7 0649         | 8 6234         | .2476  |
| .7525 | 23 7794    | 0 8050     | 5 5967     | 5 9225         | 8 8789         | .2475  |
| .7526 | 26 9435    | .3160 1224 | 5 0115     | 4 7797         | 9 1343         | .2474  |
| .7527 | 30 1083    | .3159 4396 | 4 4259     | 3 6366         | 9 3896         | .2473  |
| .7528 | 33 2737    | 8 7564     | 3 8401     | 2 4931         | 9 6448         | .2472  |
| .7529 | 36 4399    | 8 0729     | 3 2539     | 1 3493         | .9689 8998     | .2471  |
| .7530 | .6839 6067 | .3157 3891 | .4312 6674 | .6580 2052     | .9690 1548     | .2470  |
| .7531 | 42 7742    | 6 7050     | 2 0806     | .6579 0606     | 0 4096         | .2469  |
| .7532 | 45 9424    | 6 0206     | 1 4935     | 7 9158         | 0 6644         | .2468  |
| .7533 | 49 1113    | 5 3358     | 0 9061     | 6 7706         | 0 9190         | .2467  |
| .7534 | 52 2809    | 4 6507     | .4310 3183 | 5 6250         | 1 1735         | .2466  |
| .7535 | 55 4512    | 3 9654     | .4309 7303 | 4 4791         | 1 4279         | .2465  |
| .7536 | 58 6221    | 3 2797     | 9 1419     | 3 3328         | 1 6822         | .2464  |
| .7537 | 61 7938    | 2 5936     | 8 5532     | 2 1862         | 1 9364         | .2463  |
| .7538 | 64 9661    | 1 9073     | 7 9643     | .6571 0392     | 2 1905         | .2462  |
| .7539 | 68 1392    | 1 2206     | 7 3750     | .6569 8919     | 2 4444         | .2461  |
| .7540 | .6871 3129 | .3150 5337 | .4306 7853 | .6568 7442     | .9692 6983     | .2460  |
| .7541 | 74 4873    | .3149 8464 | 6 1954     | 7 5961         | 2 9520         | .2459  |
| .7542 | 77 6624    | 9 1588     | 5 6052     | 6 4477         | 3 2057         | .2458  |
| .7543 | 80 8382    | 8 4708     | 5 0146     | 5 2990         | 3 4592         | .2457  |
| .7544 | 84 0147    | 7 7826     | 4 4238     | 4 1499         | 3 7126         | .2456  |
| .7545 | 87 1919    | 7 0940     | 3 8326     | 3 0005         | 3 9659         | .2455  |
| .7546 | 90 3697    | 6 4052     | 3 2411     | 1 8507         | 4 2191         | .2454  |
| .7547 | 93 5483    | 5 7160     | 2 6493     | .6560 7005     | 4 4722         | .2453  |
| .7548 | 96 7276    | 5 0265     | 2 0572     | .6559 5500     | 4 7252         | .2452  |
| .7549 | .6899 9075 | 4 3366     | 1 4648     | 8 3991         | 4 9780         | .2451  |
| .7550 | .6903 0882 | .3143 6465 | .4300 8720 | .6557 2479     | .9695 2308     | .2450  |

E-11= E1[-.0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.7550 .2450

| p                       | x                          | z                | √pq                  | $\sqrt{1-p^2}$   | $\sqrt{1-q^2}$       | q              |
|-------------------------|----------------------------|------------------|----------------------|------------------|----------------------|----------------|
| .7550                   | .6903 0882                 | .3143 6465       | .4300 8720           | .6557 2479       | .9695 2308           | .2450          |
|                         | 06 2696                    | 2 9560           | .4300 2789           | 6 0963           | 5 4834               |                |
| .7551<br>.7552          | 09 4517                    | 2 2652           | .4299 6856           | 4 9444           | 5 7360               | .2449<br>.2448 |
| .7553                   | 12 6344                    | 1 5741           | 9 0919               | 3 7921           | 5 9884               | .2447          |
| .7554                   | 15 8179                    | 0 8827           | 8 4979               | 2 6395           | 6 2407               | .2446          |
| .7555                   | 19 0021                    | .3140 1910       | 7 9036               | 1 4865           | 6 4929               | .2445          |
| .7556                   | 22 1870                    | .3139 4989       | 7 3089               | .6550 3331       | 6 7450               | .2444          |
| .7557                   | 25 3725                    | 8 8065           | 6 7140               | .6549 1794       | 6 9970               | .2443          |
| .7558<br>. <b>7</b> 559 | 28 5588<br>31 <b>7</b> 458 | 8 1138<br>7 4208 | 6 1187<br>5 5231     | 8 0254<br>6 8709 | 7 2489<br>7 5007     | .2442          |
| .7560                   | .6934 9335                 | .3136 7275       | .4294 9272           | .6545 7162       | .9697 7523           | .2440          |
| .7561                   | 38 1219                    | 6 0338           | 4 3310               | 4 5610           | 8 0039               | .2439          |
| .7562                   | 41 3110                    | 5 3398           | 3 7345               | 3 4055           | 8 2553               | .2438          |
| .7563                   | 44 5008                    | 4 6456           | 3 1377               | 2 2497           | 8 5066               | .2437          |
| .7564                   | 47 6913                    | 3 9509           | 2 5405               | .6541 0935       | 8 7579               | .2436          |
| .7565                   | 50 8825                    | 3 2560           | 1 9430               | .6539 9369       | 9 0090               | .2435          |
| .7566                   | 54 0744                    | 2 5608           | 1 3452               | 8 7800           | 9 2600               | .2434          |
| .7567<br>.7568          | 57 2671<br>60 4604         | 1 8652<br>1 1693 | 0 7471<br>.4290 1487 | 7 6227<br>6 4651 | 9 5109<br>.9699 7616 | .2433          |
| .7569                   | 63 6544                    | .3130 4731       | .4289 5500           | 5 3071           | .9700 0123           | .2431          |
| .7570                   | .6966 8492                 | .3129 7766       | .4288 9509           | .6534 1488       | .9700 2629           | .2430          |
| .7571                   | 70 0447                    | 9 0797           | 8 3515               | 2 9901           | 0 5133               | .2429          |
| .7572                   | 73 2408                    | 8 3826           | 7 7519               | 1 8310           | 0 7637               | .2428          |
| .7573                   | 76 4377                    | 7 6851           | 7 1519               | .6530 6716       | 1 0139               | .2427          |
| .7574                   | 79 6353                    | 6 9873           | 6 5515               | .6529 5118       | 1 2640               | .2426          |
| .7575<br>.7576          | 82 8337<br>86 0327         | 6 2892<br>5 5907 | 5 9509               | 8 3516           | 1 5141               | .2425          |
|                         |                            | <b>{</b>         | 5 3499               | 7 1911           | 1 7640               | .2424          |
| .7577<br>.7578          | 89 2325<br>92 4329         | 4 8920<br>4 1929 | 4 7487<br>4 1471     | 6 0303<br>4 8690 | 2 0138<br>2 2634     | .2423          |
| .7579                   | 95 6341                    | 3 4935           | 3 5451               | 3 7075           | 2 5130               | .2421          |
| .7580                   | .6998 8360                 | .3122 7937       | .4282 9429           | .6522 5455       | .9702 7625           | .2420          |
| .7581                   | .7002 0386                 | 2 0937           | 2 3404               | 1 3832           | 3 0119               | .2419          |
| .7582                   | 05 2420                    | 1 3933           | 1 7375               | .6520 2205       | 3 2611               | .2418          |
| .7583                   | 08 4460                    | .3120 6927       | 1 1343               | .6519 0575       | 3 5102               | .2417          |
| .7584                   | 11 6508                    | .3119 9917       | .4280 5308           | 7 8941           | 3 7593               | .2416          |
| .7585<br>.7586          | 14 8563<br>18 0625         | 9 2903<br>8 5887 | .4279 9270<br>9 3228 | 6 7304<br>5 5663 | 4 0082<br>4 2570     | .2415          |
| .7587                   | 21 2694                    | 7 8867           | 8 7184               | 4 4018           | 4 5057               | .2413          |
| .7588                   | 24 4771                    | 7 1844           | 8 1136               | 3 2370           | 4 7543               | .2412          |
| .7589                   | 27 6855                    | 6 4818           | 7 5085               | 2 0718           | 5 0028               | .2411          |
| .7590                   | .7030 8946                 | .3115 7789       | .4276 9031           | .6510 9062       | .9705 2512           | .2410          |
| .7591                   | 34 1044                    | 5 0756           | 6 2973               | .6509 7403       | 5 4994               | .2409          |
| .7592                   | 37 3150                    | 4 3721           | 5 6913               | 8 5740           | 5 7476               | .2408          |
| .7593                   | 40 5263                    | 3 6682           | 5 0849               | 7 4074           | 5 9956               | .2407          |
| .7594<br>.7595          | 43 7383<br>46 9510         | 2 9640           | 4 4782               | 6 2404<br>5 0730 | 6 2436               | .2406          |
| .7596                   | 50 1645                    | 2 2594<br>1 5546 | 3 8712<br>3 2639     | 3 9053           | 6 4914<br>6 7391     | .2405<br>.2404 |
| .7597                   | 53 3787                    | 0 8494           | 2 6562               | 2 7372           | 6 9867               | .2403          |
| .7598                   | 56 5936                    | .3110 1439       | 2 0482               | 1 5687           | 7 2342               | .2402          |
| .7599                   | 59 8092                    | .3109 4381       | 1 4399               | .6500 3999       | 7 4816               | . 2401         |
| .7600                   | .7063 0256                 | .3108 7319       | .4270 8313           | .6499 2307       | .9707 7289           | .2400          |

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.7600 .2400

| ./600 |            |            |            |                |                | .2400 |
|-------|------------|------------|------------|----------------|----------------|-------|
| p     | x          | Z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
| .7600 | .7063 0256 | .3108 7319 | .4270 8313 | .6499 2307     | .9707 7289     | .2400 |
| .7601 | 66 2427    | 8 0255     | .4270 2224 | 8 0612         | 7 9761         | .2399 |
| .7602 | 69 4605    | 7 3187     | .4269 6131 | 6 8913         | 8 2231         | .2398 |
| .7603 | 72 6791    | 6 6116     | 9 0035     | 5 7210         | 8 4701         | .2397 |
| .7604 | 75 8984    | 5 9041     | 8 3936     | 4 5503         | 8 7169         | .2396 |
| .7605 | 79 1185    | 5 1964     | 7 7834     | 3 3793         | 8 9636         | .2395 |
| .7606 | 82 3393    | 4 4883     | 7 1728     | 2 2079         | 9 2103         | .2394 |
| .7607 | 85 5608    | 3 7799     | 6 5620     | .6491 0362     | 9 4568         | .2393 |
| .7608 | 88 7830    | 3 0712     | 5 9508     | .6489 8641     | 9 7032         | .2392 |
| .7609 | 92 0060    | 2 3622     | 5 3393     | 8 6916         | .9709 9495     | .2391 |
| .7610 | .7095 2297 | .3101 6528 | .4264 7274 | .6487 5188     | .9710 1957     | .2390 |
| .7611 | .7098 4542 | 0 9431     | 4 1153     | 6 3456         | 0 4418         | .2389 |
| .7612 | .7101 6794 | .3100 2331 | 3 5028     | 5 1720         | 0 6877         | .2388 |
| .7613 | 04 9053    | .3099 5228 | 2 8900     | 3 9981         | 0 9336         | .2387 |
| .7614 | 08 1320    | 8 8121     | 2 2769     | 2 8238         | 1 1793         | .2386 |
| .7615 | 11 3594    | 8 1012     | 1 6634     | 1 6491         | 1 4250         | .2385 |
| .7616 | 14 5875    | 7 3899     | 1 0496     | .6480 4741     | 1 6705         | .2384 |
| .7617 | 17 8164    | 6 6782     | .4260 4355 | .6479 2987     | 1 9159         | .2383 |
| .7618 | 21 0461    | 5 9663     | .4259 8211 | 8 1229         | 2 1612         | .2382 |
| .7619 | 24 2765    | 5 2540     | 9 2064     | 6 9467         | 2 4064         | .2381 |
| .7620 | .7127 5076 | .3094 5414 | .4258 5913 | .6475 7702     | .9712 6515     | .2380 |
| .7621 | 30 7395    | 3 8285     | 7 9759     | 4 5933         | 2 8965         | .2379 |
| .7622 | 33 9721    | 3 1153     | 7 3602     | 3 4161         | 3 1414         | .2378 |
| .7623 | 37 2054    | 2 4017     | 6 7442     | 2 2385         | 3 3862         | .2377 |
| .7624 | 40 4395    | 1 6879     | 6 1278     | .6471 0605     | 3 6308         | .2376 |
| .7625 | 43 6744    | 0 9737     | 5 5111     | .6469 8821     | 3 8754         | .2375 |
| .7626 | 46 9100    | .3090 2591 | 4 8941     | 8 7034         | 4 1198         | .2374 |
| .7627 | 50 1464    | .3089 5443 | 4 2768     | 7 5243         | 4 3642         | .2373 |
| .7628 | 53 3834    | 8 8291     | 3 6591     | 6 3449         | 4 6084         | .2372 |
| .7629 | 56 6213    | 8 1136     | 3 0411     | 5 1650         | 4 8525         | .2371 |
| .7630 | .7159 8599 | .3087 3978 | .4252 4228 | .6463 9848     | .9715 0965     | .2370 |
| .7631 | 63 0992    | 6 6816     | 1 8042     | 2 8043         | 5 3404         | .2369 |
| .7632 | 66 3393    | 5 9652     | 1 1852     | 1 6233         | 5 5842         | .2368 |
| .7633 | 69 5802    | 5 2484     | .4250 5660 | .6460 4420     | 5 8279         | .2367 |
| .7634 | 72 8218    | 4 5312     | .4249 9464 | .6459 2603     | 6 0714         | .2366 |
| .7635 | 76 0642    | 3 8138     | 9 3264     | 8 0783         | 6 3149         | .2365 |
| .7636 | 79 3073    | 3 0960     | 8 7062     | 6 8958         | 6 5582         | .2364 |
| .7637 | 82 5512    | 2 3779     | 8 0856     | 5 7131         | 6 8015         | .2363 |
| .7638 | 85 7958    | 1 6595     | 7 4647     | 4 5299         | 7 0446         | .2362 |
| .7639 | 89 0412    | 0 9408     | 6 8434     | 3 3463         | 7 2876         | .2361 |
| .7640 | .7192 2873 | .3080 2217 | .4246 2219 | .6452 1624     | .9717 5306     | .2360 |
| .7641 | 95 5342    | .3079 5023 | 5 6000     | .6450 9781     | 7 7734         | .2359 |
| .7642 | .7198 7819 | 8 7826     | 4 9777     | .6449 7935     | 8 0161         | .2358 |
| .7643 | .7202 0303 | 8 0626     | 4 3552     | 8 6085         | 8 2586         | .2357 |
| .7644 | 05 2794    | 7 3422     | 3 7323     | 7 4231         | 8 5011         | .2356 |
| .7645 | 08 5294    | 6 6215     | 3 1091     | 6 2373         | 8 7435         | .2355 |
| .7646 | 11 7801    | 5 9005     | 2 4856     | 5 0511         | 8 9857         | .2354 |
| .7647 | 15 0316    | 5 1791     | 1 8617     | 3 8646         | 9 2279         | .2353 |
| .7648 | 18 2838    | 4 4575     | 1 2376     | 2 6777         | 9 4699         | .2352 |
| .7649 | 21 5367    | 3 7355     | .4240 6130 | 1 4904         | 9 7119         | .2351 |
| .7650 | .7224 7905 | .3073 0132 | .4239 9882 | .6440 3028     | .9719 9537     | .2350 |

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.7650 .2350

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .7650 | .7224 7905 | .3073 0132 | .4239 9882 | .6440 3028     | .9719 9537     | .2350 |
| .7651 | 28 0450    | 2 2905     | 9 3630     | .6439 1148     | .9720 1954     | .2349 |
| .7652 | 31 3003    | 1 5676     | 8 7375     | 7 9264         | 0 4370         | .2348 |
| .7653 | 34 5564    | 0 8443     | 8 1117     | 6 7376         | 0 6785         | .2347 |
| .7654 | 37 8132    | .3070 1207 | 7 4856     | 5 5485         | 0 9199         | .2346 |
| .7655 | 41 0708    | .3069 3967 | 6 8591     | 4 3589         | 1 1612         | .2345 |
| .7656 | 44 3291    | 8 6724     | 6 2323     | 3 1690         | 1 4024         | .2344 |
| .7657 | 47 5882    | 7 9478     | 5 6052     | 1 9788         | 1 6434         | .2343 |
| .7658 | 50 8481    | 7 2229     | 4 9777     | .6430 7881     | 1 8844         | .2342 |
| .7659 | 54 1088    | 6 4977     | 4 3499     | .6429 5971     | 2 1252         | .2341 |
| .7660 | .7257 3702 | .3065 7721 | .4233 7218 | .6428 4057     | .9722 3660     | .2340 |
| .7661 | 60 6324    | 5 0462     | 3 0933     | 7 2139         | 2 6066         | .2339 |
| .7662 | 63 8954    | 4 3200     | 2 4645     | 6 0218         | 2 8471         | .2338 |
| .7663 | 67 1592    | 3 5934     | 1 8354     | 4 8293         | 3 0875         | .2337 |
| .7664 | 70 4237    | 2 8665     | 1 2060     | 3 6364         | 3 3278         | .2336 |
| .7665 | 73 6890    | 2 1393     | .4230 5762 | 2 4431         | 3 5680         | .2335 |
| .7666 | 76 9551    | 1 4118     | .4229 9461 | 1 2494         | 3 8081         | .2334 |
| .7667 | 80 2219    | .3060 6839 | 9 3157     | .6420 0554     | 4 0481         | .2333 |
| .7668 | 83 4896    | .3059 9558 | 8 6849     | .6418 8610     | 4 2879         | .2332 |
| .7669 | 86 7580    | 9 2272     | 8 0538     | 7 6662         | 4 5277         | .2331 |
| .7670 | .7290 0272 | .3058 4984 | .4227 4224 | .6416 4710     | .9724 7673     | .2330 |
| .7671 | 93 2972    | 7 7692     | 6 7906     | 5 2754         | 5 0069         | .2329 |
| .7672 | 96 5679    | 7 0397     | 6 1585     | 4 0795         | 5 2463         | .2328 |
| .7673 | .7299 8394 | 6 3099     | 5 5261     | 2 8832         | 5 4856         | .2327 |
| .7674 | .7303 1117 | 5 5798     | 4 8934     | 1 6865         | 5 7249         | .2326 |
| .7675 | 06 3848    | 4 8493     | 4 2603     | .6410 4895     | 5 9640         | .2325 |
| .7676 | 09 6587    | 4 1185     | 3 6269     | .6409 2920     | 6 2030         | .2324 |
| .7677 | 12 9333    | 3 3874     | 2 9931     | 8 0942         | 6 4418         | .2323 |
| .7678 | 16 2088    | 2 6559     | 2 3591     | 6 8960         | 6 6806         | .2322 |
| .7679 | 19 4850    | 1 9241     | 1 7246     | 5 6974         | 6 9193         | .2321 |
| .7680 | .7322 7620 | .3051 1920 | .4221 0899 | .6404 4984     | .9727 1579     | .2320 |
| .7681 | 26 0398    | .3050 4596 | .4220 4548 | 3 2991         | 7 3963         | .2319 |
| .7682 | 29 3184    | .3049 7268 | .4219 8194 | 2 0993         | 7 6347         | .2318 |
| .7683 | 32 5978    | 8 9937     | 9 1837     | .6400 8992     | 7 8729         | .2317 |
| .7684 | 35 8780    | 8 2603     | 8 5476     | .6399 6987     | 8 1110         | .2316 |
| .7685 | 39 1589    | 7 5265     | 7 9112     | 8 4979         | 8 3490         | .2315 |
| .7686 | 42 4407    | 6 7925     | 7 2745     | 7 2966         | 8 5869         | .2314 |
| .7687 | 45 7232    | 6 0581     | 6 6374     | 6 0950         | 8 8247         | .2313 |
| .7688 | 49 0066    | 5 3233     | 6 0000     | 4 8930         | 9 0624         | .2312 |
| .7689 | 52 2907    | 4 5883     | 5 3623     | 3 6906         | 9 3000         | .2311 |
| .7690 | .7355 5756 | .3043 8529 | .4214 7242 | .6392 4878     | .9729 5375     | .2310 |
| .7691 | 58 8613    | 3 1171     | 4 0858     | 1 2846         | .9729 7749     | .2309 |
| .7692 | 62 1478    | 2 3811     | 3 4470     | .6390 0811     | .9730 0121     | .2308 |
| .7693 | 65 4351    | 1 6447     | 2 8080     | .6388 8771     | 0 2493         | .2307 |
| .7694 | 68 7232    | 0 9080     | 2 1686     | 7 6728         | 0 4863         | .2306 |
| .7695 | 72 0121    | .3040 1710 | 1 5288     | 6 4681         | 0 7233         | .2305 |
| .7696 | 75 3018    | .3039 4336 | 0 8887     | 5 2630         | 0 9601         | .2304 |
| .7697 | 78 5922    | 8 6959     | .4210 2483 | 4 0576         | 1 1968         | .2303 |
| .7698 | 81 8835    | 7 9579     | .4209 6076 | 2 8517         | 1 4334         | .2302 |
| .7699 | 85 1756    | 7 2195     | 8 9665     | 1 6455         | 1 6699         | .2301 |
| .7700 | .7388 4685 | .3036 4808 | .4208 3251 | .6380 4389     | .9731 9063     | .2300 |

E<sup>-11</sup>= E<sup>11</sup>=.0000,0001 .0000,0000+ .0000,0000+ .0000,0000+ .0000,0000+

.7700 .2300

|       | <del></del> |            |            |                |                |        |
|-------|-------------|------------|------------|----------------|----------------|--------|
| P     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
| .7700 | .7388 4685  | .3036 4808 | .4208 3251 | .6380 4389     | .9731 9063     | .2300  |
| .7701 | 91 7622     | 5 7418     | 7 6833     | .6379 2319     | 2 1426         | .2299  |
| .7702 | 95 0567     | 5 0025     | 7 0412     | 8 0245         | 2 3787         | .2298  |
| .7703 | .7398 3520  | 4 2628     | 6 3988     | 6 8167         | 2 6148         | .2297  |
| .7704 | .7401 6480  | 3 5228     | 5 7561     | 5 6085         | 2 8508         | .2296  |
| .7705 | 04 9449     | 2 7825     | 5 1130     | 4 4000         | 3 0866         | .2295  |
| .7706 | 08 2426     | 2 0418     | 4 4695     | 3 1910         | 3 3224         | .2294  |
| .7707 | 11 5411     | 1 3008     | 3 8258     | 1 9817         | 3 5580         | .2293  |
| .7708 | 14 8405     | .3030 5595 | 3 1817     | .6370 7720     | 3 7935         | .2292  |
| .7709 | 18 1406     | .3029 8179 | 2 5372     | .6369 5619     | 4 0289         | .2291  |
| .7710 | .7421 4415  | .3029 0759 | .4201 8924 | .6368 3514     | .9734 2642     | .2290  |
| .7711 | 24 7432     | 8 3336     | 1 2473     | 7 1406         | 4 4994         | . 2289 |
| .7712 | 28 0458     | 7 5909     | .4200 6019 | 5 9293         | 4 7345         | . 2288 |
| .7713 | 31 3492     | 6 8480     | .4199 9561 | 4 7177         | 4 9695         | . 2287 |
| .7714 | 34 6534     | 6 1047     | 9 3099     | 3 5056         | 5 2044         | .2286  |
| .7715 | 37 9583     | 5 3610     | 8 6635     | 2 2932         | 5 4391         | .2285  |
| .7716 | 41 2641     | 4 6171     | 8 0167     | .6361 0804     | 5 6738         | .2284  |
| .7717 | 44 5708     | 3 8728     | 7 3695     | .6359 8672     | 5 9083         | .2283  |
| .7718 | 47 8782     | 3 1282     | 6 7221     | 8 6536         | 6 1428         | .2282  |
| .7719 | 51 1864     | 2 3832     | 6 0742     | 7 4397         | 6 3771         | .2281  |
| .7720 | .7454 4955  | .3021 6379 | .4195 4261 | .6356 2253     | .9736 6113     | .2280  |
| .7721 | 57 8054     | 0 8923     | 4 7776     | 5 0105         | 6 8454         | .2279  |
| .7722 | 61 1161     | .3020 1464 | 4 1288     | 3 7954         | 7 0794         | .2278  |
| .7723 | 64 4276     | .3019 4001 | 3 4796     | 2 5799         | 7 3133         | .2277  |
| .7724 | 67 7399     | 8 6535     | 2 8301     | 1 3639         | 7 5471         | .2276  |
| .7725 | 71 0530     | 7 9065     | 2 1802     | .6350 1476     | 7 7808         | .2275  |
| .7726 | 74 3670     | 7 1593     | 1 5300     | .6348 9309     | 8 0144         | .2274  |
| .7727 | 77 6818     | 6 4117     | 0 8795     | 7 7138         | 8 2478         | .2273  |
| .7728 | 80 9974     | 5 6637     | .4190 2286 | 6 4964         | 8 4812         | .2272  |
| .7729 | 84 3138     | 4 9155     | .4189 5774 | 5 2785         | 8 7144         | .2271  |
| .7730 | .7487 6311  | .3014 1669 | .4188 9259 | .6344 0602     | .9738 9476     | .2270  |
| .7731 | 90 9492     | 3 4179     | 8 2740     | 2 8416         | 9 1806         | .2269  |
| .7732 | 94 2681     | 2 6687     | 7 6218     | 1 6225         | 9 4135         | .2268  |
| .7733 | .7497 5878  | 1 9191     | 6 9692     | .6340 4031     | 9 6463         | .2267  |
| .7734 | .7500 9084  | 1 1692     | 6 3163     | .6339 1832     | .9739 8791     | .2266  |
| .7735 | 04 2298     | .3010 4189 | 5 6630     | 7 9630         | .9740 1117     | .2265  |
| .7736 | 07 5520     | .3009 6683 | 5 0094     | 6 7424         | 0 3441         | .2264  |
| .7737 | 10 8750     | 8 9174     | 4 3555     | 5 5214         | 0 5765         | .2263  |
| .7738 | 14 1989     | 8 1661     | 3 7012     | 4 3000         | 0 8088         | .2262  |
| .7739 | 17 5236     | 7 4146     | 3 0466     | 3 0782         | 1 0410         | .2261  |
| .7740 | .7520 8491  | .3006 6626 | .4182 3917 | .6331 8560     | .9741 2730     | .2260  |
| .7741 | 24 1755     | 5 9104     | 1 7364     | .6330 6334     | 1 5050         | .2259  |
| .7742 | 27 5027     | 5 1578     | 1 0807     | .6329 4104     | 1 7368         | .2258  |
| .7743 | 30 8307     | 4 4049     | .4180 4247 | 8 1870         | 1 9685         | .2257  |
| .7744 | 34 1595     | 3 6516     | .4179 7684 | 6 9633         | 2 2002         | .2256  |
| .7745 | 37 4892     | 2 8981     | 9 1117     | 5 7391         | 2 4317         | .2255  |
| .7746 | 40 8198     | 2 1441     | 8 4547     | 4 5145         | 2 6631         | .2254  |
| .7747 | 44 1512     | 1 3899     | 7 7974     | 3 2896         | 2 8944         | .2253  |
| .7748 | 47 4834     | .3000 6353 | 7 1397     | 2 0642         | 3 1256         | .2252  |
| .7749 | 50 8164     | .2999 8804 | 6 4817     | .6320 8385     | 3 3567         | .2251  |
| .7750 | .7554 1503  | .2999 1251 | .4175 8233 | .6319 6123     | .9743 5876     | .2250  |

E-11= E<sup>1</sup>[-.0000,0001 .0000,0000+ .0000,0000+ .0000,0001 .0000,0000+

.7750 .2250

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|------------|------------|----------------|----------------|-------|
| .7750 | .7554 1503 | .2999 1251 | .4175 8233 | .6319 6123     | .9743 5876     | .2250 |
| .7751 | 57 4850    | 8 3696     | 5 1645     | 8 3858         | 3 8185         | .2249 |
| .7752 | 60 8206    | 7 6137     | 4 5055     | 7 1589         | 4 0493         | .2248 |
| .7753 | 64 1570    | 6 8574     | 3 8461     | 5 9315         | 4 2799         | .2247 |
| .7754 | 67 4942    | 6 1008     | 3 1863     | 4 7038         | 4 5105         | .2246 |
| .7755 | 70 8323    | 5 3439     | 2 5262     | 3 4757         | 4 7409         | .2245 |
| .7756 | 74 1712    | 4 5867     | 1 8658     | 2 2471         | 4 9712         | .2244 |
| .7757 | 77 5110    | 3 8291     | 1 2050     | .6311 0182     | 5 2014         | .2243 |
| .7758 | 80 8516    | 3 0712     | .4170 5438 | .6309 7889     | 5 4315         | .2242 |
| .7759 | 84 1931    | 2 3129     | .4169 8824 | 8 5592         | 5 6615         | .2241 |
| .7760 | .7587 5354 | .2991 5543 | .4169 2206 | .6307 3291     | .9745 8914     | .2240 |
| .7761 | 90 8786    | 0 7954     | 8 5584     | 6 0986         | 6 1212         | .2239 |
| .7762 | 94 2226    | .2990 0361 | 7 8959     | 4 8676         | 6 3509         | .2238 |
| .7763 | .7597 5675 | .2989 2765 | 7 2330     | 3 6363         | 6 5805         | .2237 |
| .7764 | .7600 9132 | 8 5166     | 6 5698     | 2 4046         | 6 8099         | .2236 |
| .7765 | 04 2598    | 7 7564     | 5 9063     | .6301 1725     | 7 0393         | .2235 |
| .7766 | 07 6072    | 6 9958     | 5 2424     | .6299 9400     | 7 2685         | .2234 |
| .7767 | 10 9554    | 6 2348     | 4 5781     | 8 7071         | 7 4977         | .2233 |
| .7768 | 14 3046    | 5 4736     | 3 9135     | 7 4738         | 7 7267         | .2232 |
| .7769 | 17 6546    | 4 7120     | 3 2486     | 6 2401         | 7 9556         | .2231 |
| .7770 | .7621 0054 | .2983 9500 | .4162 5833 | .6295 0060     | .9748 1844     | .2230 |
| .7771 | 24 3571    | 3 1878     | 1 9177     | 3 7714         | 8 4132         | .2229 |
| .7772 | 27 7096    | 2 4252     | 1 2517     | 2 5365         | 8 6418         | .2228 |
| .7773 | 31 0631    | 1 6622     | .4160 5854 | 1 3012         | 8 8702         | .2227 |
| .7774 | 34 4173    | 0 8990     | .4159 9187 | .6290 0655     | 9 0986         | .2226 |
| .7775 | 37 7724    | .2980 1354 | 9 2517     | .6288 8294     | 9 3269         | .2225 |
| .7776 | 41 1284    | .2979 3714 | 8 5844     | 7 5929         | 9 5551         | .2224 |
| .7777 | 44 4853    | 8 6071     | 7 9167     | 6 3559         | .9749 7831     | .2223 |
| .7778 | 47 8430    | 7 8425     | 7 2486     | 5 1186         | .9750 0111     | .2222 |
| .7779 | 51 2016    | 7 0776     | 6 5802     | 3 8809         | 0 2389         | .2221 |
| .7780 | .7654 5610 | .2976 3123 | .4155 9115 | .6282 6428     | .9750 4667     | .2220 |
| .7781 | 57 9213    | 5 5466     | 5 2424     | 1 4042         | 0 6943         | .2219 |
| .7782 | 61 2824    | 4 7807     | 4 5729     | .6280 1653     | 0 9218         | .2218 |
| .7783 | 64 6444    | 4 0144     | 3 9031     | .6278 9259     | 1 1492         | .2217 |
| .7784 | 68 0073    | 3 2478     | 3 2330     | 7 6862         | 1 3765         | .2216 |
| .7785 | 71 3711    | 2 4808     | 2 5625     | 6 4460         | 1 6037         | .2215 |
| .7786 | 74 7357    | 1 7135     | 1 8916     | 5 2055         | 1 8308         | .2214 |
| .7787 | 78 1012    | 0 9458     | 1 2204     | 3 9645         | 2 0578         | .2213 |
| .7788 | 81 4676    | .2970 1779 | .4150 5489 | 2 7232         | 2 2847         | .2212 |
| .7789 | 84 8348    | .2969 4095 | .4149 8770 | 1 4814         | 2 5114         | .2211 |
| .7790 | .7688 2029 | .2968 6409 | .4149 2047 | .6270 2392     | .9752 7381     | .2210 |
| .7791 | 91 5719    | 7 8719     | 8 5322     | .6268 9967     | 2 9646         | .2209 |
| .7792 | 94 9417    | 7 1026     | 7 8592     | 7 7537         | 3 1911         | .2208 |
| .7793 | .7698 3125 | 6 3329     | 7 1859     | 6 5103         | 3 4174         | .2207 |
| .7794 | .7701 6841 | 5 5629     | 6 5123     | 5 2665         | 3 6436         | .2206 |
| .7795 | 05 0565    | 4 7926     | 5 8383     | 4 0223         | 3 8697         | .2205 |
| .7796 | 08 4299    | 4 0219     | 5 1639     | 2 7777         | 4 0958         | .2204 |
| .7797 | 11 8041    | 3 2509     | 4 4892     | 1 5326         | 4 3217         | .2203 |
| .7798 | 15 1793    | 2 4795     | 3 8142     | .6260 2872     | 4 5475         | .2202 |
| .7799 | 18 5553    | 1 7079     | 3 1388     | .6259 0414     | 4 7731         | .2201 |
| .7800 | .7721 9321 | .2960 9358 | .4142 4630 | .6257 7951     | .9754 9987     | .2200 |

ε<sup>-1</sup>[= .0000,0001 .0000,0000+ .0000,0000+ .0000,0001 .0000,0000+ .0000,0001 .0000,0000+

| p     | x          | z           | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|------------|-------------|------------|----------------|----------------|-------|
| .7800 | .7721 9321 | .2960 9358  | .4142 4630 | .6257 7951     | .9754 9987     | .2200 |
| .7801 | 25 3099    | .2960 1635  | 1 7869     | 6 5485         | 5 2242         | .2199 |
| .7802 | 28 6885    | .2959 3908  | 1 1105     | 5 3014         | 5 4496         | .2198 |
| .7803 | 32 0680    | 8 6177      | .4140 4337 | 4 0540         | 5 6748         | .2197 |
| .7804 | 35 4484    | 7 8444      | .4139 7565 | 2 8061         | 5 9000         | .2196 |
| .7805 | 38 8297    | 7 0706      | 9 0790     | 1 5578         | 6 1250         | .2195 |
| .7806 | 42 2119    | 6 2966      | 8 4011     | .6250 3091     | 6 3499         | .2194 |
| .7807 | 45 5949    | 5 5222      | 7 7229     | .6249 0600     | 6 5748         | .2193 |
| .7808 | 48 9789    | 4 7475      | 7 0444     | 7 8105         | 6 7995         | .2192 |
| .7809 | 52 3637    | 3 9724      | 6 3654     | 6 5606         | 7 0214         | .2191 |
| .7810 | .7755 7494 | . 2953 1970 | .4135 6862 | .6245 3102     | .9757 2486     | .2190 |
| .7811 | 59 1360    | 2 4213      | 5 0065     | 4 0595         | 7 4730         | .2189 |
| .7812 | 62 5235    | 1 6452      | 4 3265     | 2 8083         | 7 6973         | .2188 |
| .7813 | 65 9119    | 0 8688      | 3 6462     | 1 5568         | 7 9214         | .2187 |
| .7814 | 69 3012    | .2950 0920  | 2 9655     | .6240 3048     | 8 1455         | .2186 |
| .7815 | 72 6913    | .2949 3149  | 2 2845     | .6239 0524     | 8 3695         | .2185 |
| .7816 | 76 0824    | 8 5375      | 1 6031     | 7 7996         | 8 5933         | .2184 |
| .7817 | 79 4744    | 7 7597      | 0 9213     | 6 5464         | 8 8171         | .2183 |
| .7818 | 82 8672    | 6 9816      | .4130 2392 | 5 2928         | 9 0407         | .2182 |
| .7819 | 86 2610    | 6 2031      | .4129 5568 | 4 0387         | 9 2643         | .2181 |
| .7820 | .7789 6556 | . 2945 4243 | .4128 8739 | .6232 7843     | .9759 4877     | .2180 |
| .7821 | 93 0511    | 4 6452      | 8 1908     | 1 5294         | 9 7110         | .2179 |
| .7822 | 96 4476    | 3 8657      | 7 5072     | .6230 2742     | .9759 9342     | .2178 |
| .7823 | .7799 8449 | 3 0859      | 6 8234     | .6229 0185     | .9760 1573     | .2177 |
| .7824 | .7803 2432 | 2 3057      | 6 1391     | 7 7624         | 0 3803         | .2176 |
| .7825 | 06 6423    | 1 5252      | 5 4545     | 6 5058         | 0 6032         | .2175 |
| .7826 | 10 0424    | .2940 7444  | 4 7696     | 5 2489         | 0 8260         | .2174 |
| .7827 | 13 4433    | .2939 9632  | 4 0843     | 3 9916         | 1 0487         | .2173 |
| .7828 | 16 8452    | 9 1817      | 3 3986     | 2 7338         | 1 2712         | .2172 |
| .7829 | 20 2479    | 8 3999      | 2 7126     | 1 4756         | 1 4937         | .2171 |
| .7830 | .7823 6516 | .2937 6177  | .4122 0262 | .6220 2170     | .9761 7160     | .2170 |
| .7831 | 27 0562    | 6 8351      | 1 3395     | .6218 9580     | 1 9383         | .2169 |
| .7832 | 30 4617    | 6 0523      | .4120 6524 | 7 6986         | 2 1604         | .2168 |
| .7833 | 33 8681    | 5 2690      | .4119 9649 | 6 4388         | 2 3824         | .2167 |
| .7834 | 37 2754    | 4 4855      | 9 2771     | 5 1785         | 2 6044         | .2166 |
| .7835 | 40 6836    | 3 7016      | 8 5890     | 3 9178         | 2 8262         | .2165 |
| .7836 | 44 0927    | 2 9173      | 7 9004     | 2 6568         | 3 0479         | .2164 |
| .7837 | 47 5027    | 2 1328      | 7 2116     | 1 3953         | 3 2695         | .2163 |
| .7838 | 50 9137    | 1 3478      | 6 5223     | .6210 1333     | 3 4910         | .2162 |
| .7839 | 54 3255    | .2930 5626  | 5 8327     | .6208 8710     | 3 7124         | .2161 |
| .7840 | .7857 7383 | .2929 7770  | .4115 1428 | .6207 6082     | .9763 9336     | .2160 |
| .7841 | 61 1520    | 8 9910      | 4 4525     | 6 3451         | 4 1548         | .2159 |
| .7842 | 64 5666    | 8 2047      | 3 7618     | 5 0815         | 4 3759         | .2158 |
| .7843 | 67 9821    | 7 4181      | 3 0708     | 3 8175         | 4 5968         | .2157 |
| .7844 | 71 3985    | 6 6311      | 2 3794     | 2 5530         | 4 8177         | .2156 |
| .7845 | 74 8159    | 5 8438      | 1 6876     | 1 2882         | 5 0384         | .2155 |
| .7846 | 78 2342    | 5 0562      | 0 9955     | .6200 0229     | 5 2590         | .2154 |
| .7847 | 81 6534    | 4 2682      | .4110 3030 | .6198 7572     | 5 4796         | .2153 |
| .7848 | 85 0735    | 3 4799      | .4109 6102 | 7 4911         | 5 7000         | .2152 |
| .7849 | 88 4945    | 2 6912      | 8 9170     | 6 2246         | 5 9203         | .2151 |
| .7850 | .7891 9165 | .2921 9022  | .4108 2235 | .6194 9576     | .9766 1405     | .2150 |

| p              | x                  | z                        | √pq                  | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$           | q              |
|----------------|--------------------|--------------------------|----------------------|--------------------------|--------------------------|----------------|
| .7850          | .7891 9165         | .2921 9022               | .4108 2235           | .6194 9576               | .9766 1405               | .2150          |
| .7851          | 95 3394            | 1 1128                   | 7 5295               | 3 6903                   | 6 3606                   | .2149          |
| .7852          | .7898 7632         | .2920 3231               | 6 8353               | 2 4225                   | 6 5806                   | .2148          |
| .7853          | .7902 1880         | .2919 5330               | 6 1406               | .6191 1543               | 6 8004                   | .2147          |
| .7854          | 05 6136            | 8 7427                   | 5 4457               | .6189 8856               | 7 0202                   | .2146          |
| .7855<br>.7856 | 09 0402<br>12 4678 | 7 9519<br>7 1608         | 4 7503<br>4 0546     | 8 6166<br>7 3471         | 7 2399<br>7 4594         | .2145<br>.2144 |
|                |                    |                          |                      | 1                        |                          |                |
| .7857<br>.7858 | 15 8962<br>19 3256 | 6 3694<br>5 5777         | 3 3585<br>2 6621     | 6 0772<br>4 8069         | 7 6789<br>7 8982         | .2143<br>.2142 |
| .7859          | 22 7559            | 4 7856                   | 1 9653               | 3 5361                   | 8 1175                   | .2141          |
| .7860          | .7926 1872         | .2913 9931               | .4101 2681           | .6182 2650               | .9768 3366               | .2140          |
| .7861          | 29 6194            | 3 2003                   | .4100 5706           | .6180 9934               | 8 5556                   | .2139          |
| .7862          | 33 0525            | 2 4072                   | .4099 8727           | .6179 7214               | 8 7745                   | .2138          |
| .7863          | 36 4866            | 1 6137                   | 9 1744               | 8 4489                   | 8 9933                   | .2137          |
| .7864          | 39 9215            | 0 8199                   | 8 4758               | 7 1761                   | 9 2120                   | .2136          |
| .7865          | 43 3574            | .2910 0257               | 7 7768               | 5 9028                   | 9 4306                   | .2135          |
| .7866          | 46 7943            | .2909 2312               | 7 0775               | 4 6291                   | 9 6491                   | .2134          |
| .7867<br>.7868 | 50 2321<br>53 6709 | 8 4364<br>7 6412         | 6 3778<br>5 6777     | 3 3549<br>2 0804         | .9769 8675<br>.9770 0858 | .2133<br>.2132 |
| .7869          | 57 1106            | 6 8456                   | 4 9773               | .6170 8054               | 0 3039                   | .2131          |
| .7870          | .7960 5512         | .2906 0498               | .4094 2765           | .6169 5300               | .9770 5220               | .2130          |
| .7871          | 63 9928            | 5 2535                   | 3 5753               | 8 2541                   | 0 7399                   | .2129          |
| .7872          | 67 4353            | 4 4570                   | 2 8738               | 6 9779                   | 0 9578                   | .2128          |
| .7873          | 70 8787            | 3 6600                   | 2 1719               | 5 7012                   | 1 1755                   | .2127          |
| . 7874         | 74 3231            | 2 8628                   | 1 4697               | 4 3241                   | 1 3931                   | .2126          |
| .7875<br>.7876 | 77 7685<br>81 2148 | 2 0652<br>1 2672         | 0 7670<br>.4090 0641 | 3 1465<br>1 8685         | 1 6107<br>1 8281         | .2125          |
|                |                    | ŀ                        | 1                    |                          |                          | .2124          |
| .7877<br>.7878 | 84 6620<br>88 1102 | .2900 4689<br>.2899 6703 | .4089 3607<br>8 6570 | .6160 5902<br>.6159 3113 | 2 0454<br>2 2626         | .2123<br>.2122 |
| .7879          | 91 5593            | 8 8713                   | 7 9529               | 8 0321                   | 2 4797                   | .2121          |
| .7880          | .7995 0094         | .2898 0720               | .4087 2485           | .6156 7524               | .9772 6967               | .2120          |
| .7881          | .7998 4605         | 7 2723                   | 6 5436               | 5 4723                   | 2 9135                   | .2119          |
| .7882          | .8001 9125         | 6 4723                   | 5 8385               | 4 1917                   | 3 1303                   | .2118          |
| .7883          | 05 3654            | 5 6719                   | 5 1329               | 2 9108                   | 3 3470                   | .2117          |
| . 7884         | 08 8193            | 4 8712                   | 4 4270               | 1 6294                   | 3 5635                   | .2116          |
| .7885          | 12 2742            | 4 0702                   | 3 7207<br>3 0141     | .6150 3476<br>.6149 0653 | 3 7800<br>3 9963         | .2115          |
| .7886          | 15 7300            | 3 2688                   | l .                  |                          |                          | .2114          |
| .7887<br>.7888 | 19 1868<br>22 6445 | 2 4670<br>1 6649         | 2 3071<br>1 5997     | 7 7826<br>6 4995         | 4 2126<br>4 4287         | .2113          |
| .7889          | 26 1032            | 0 8625                   | 0 8919               | 5 2159                   | 4 6447                   | .2111          |
| .7890          | .8029 5629         | . 2890 0597              | .4080 1838           | .6143 9320               | .9774 8606               | .2110          |
| .7891          | 33 0235            | .2889 2566               | .4079 4753           | 2 6476                   | 5 0764                   | .2109          |
| .7892          | 36 4851            | 8 4531                   | 8 7665               | 1 3627                   | 5 2921                   | .2108          |
| .7893          | 39 9476            | 7 6493                   | 8 0573               | .6140 0774               | 5 5077                   | .2107          |
| .7894          | 43 4111            | 6 8451                   | 7 3477               | .6138 7917               | 5 7232                   | .2106          |
| .7895<br>.7896 | 46 8756<br>50 3411 | 6 0406<br>5 2357         | 6 6377<br>5 9274     | 7 5056<br>6 2190         | 5 9386<br>6 1538         | .2105<br>.2104 |
|                | 50 3411            |                          | į                    |                          | 1                        |                |
| .7897<br>.7898 | 53 8075<br>57 2748 | 4 4305<br>3 6250         | 5 2167<br>4 5056     | 4 9320<br>3 6446         | 6 3690<br>6 5841         | .2103          |
| .7899          | 60 7432            | 2 8191                   | 3 7942               | 2 3567                   | 6 7990                   | .2101          |
| .7900          | .8064 2125         | .2882 0128               | .4073 0824           | .6131 0684               | .9777 0139               | .2100          |
| . / 900        | .0004 2125         | . 4004 UI46              | 1 .40/2 0024         | 1 .0121 0004             | 1.7111 0139              | .4100          |

 $E^{-1}_{-1}$   $E^{1}_{-1}$   $E^$ 

.7900 .2100

| p              | x                  | z                        | √pq                      | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q                |
|----------------|--------------------|--------------------------|--------------------------|----------------------|------------------|------------------|
| .7900          | .8064 2125         | .2882 0128               | .4073 0824               | .6131 0684           | .9777 0139       | .2100            |
| .7901          | 67 6828            | 1 2062                   | 2 3702                   | .6129 7797           | 7 2286           | .2099            |
| .7902          | 71 1540            | .2880 3993               | 1 6576                   | 8 4905               | 7 4432           | .2098            |
| .7903          | 74 6263            | .2879 5920               | 0 9447                   | 7 2009               | 7 6577           | .2097            |
| .7904          | 78 0995            | 8 7844                   | .4070 2314               | 5 9109               | 7 8722           | .2096            |
| .7905          | 81 5737            | 7 9764                   | .4069 5178               | 4 6204               | 8 0865           | .2095            |
| .7906          | 85 0488            | 7 1680                   | 8 8038                   | 3 3295               | 8 3007           | .2094            |
| .7907          | 88 5249            | 6 3594                   | 8 0894                   | 2 0381               | 8 5148           | .2093            |
| .7908          | 92 0020            | 5 5503                   | 7 3746                   | .6120 7464           | 8 7288           | .2092            |
| .7909          | 95 4801            | 4 7410                   | 6 6594                   | .6119 4541           | 8 9426           | .2091            |
| .7910          | .8098 9592         | .2873 9312               | .4065 9439               | .6118 1615           | .9779 1564       | .2090            |
| .7911          | .8102 4392         | 3 1212                   | 5 2280                   | 6 8684               | 9 3701           | . 2089           |
| .7912          | 05 9203            | 2 3108                   | 4 5118                   | 5 5749               | 9 5836           | . 2088           |
| .7913          | 09 4023            | 1 5000                   | 3 7951                   | 4 2809               | .9779 7971       | .2087            |
| .7914          | 12 8853            | .2870 6889               | 3 0781                   | 2 9865               | .9780 0104       | .2086            |
| .7915          | 16 3692            | .2869 8774               | 2 3608                   | 1 6917               | 0 2237           | .2085            |
| .7916          | 19 8542            | 9 0656                   | 1 6430                   | .6110 3964           | 0 4368           | . 2084           |
| .7917          | 23 3401            | 8 2534                   | 0 9249                   | .6109 1007           | 0 6498           | .2083            |
| .7918<br>.7919 | 26 8271<br>30 3150 | 7 4409<br>6 6281         | .4060 2064<br>.4059 4875 | 7 8045<br>6 5079     | 0 8627<br>1 0756 | .2082<br>.2081   |
|                |                    |                          |                          |                      |                  |                  |
| .7920          | .8133 8039         | .2865 8149               | .4058 7683               | .6105 2109           | .9781 2883       | .2080            |
| .7921          | 37 2938            | 5 0013                   | 8 0487                   | 3 9134               | 1 5009           | .2079            |
| .7922<br>.7923 | 40 7847<br>44 2766 | 4 1874<br>3 3732         | 7 3287<br>6 6083         | 2 6155<br>1 3172     | 1 7133<br>1 9257 | . 2078<br>. 2077 |
| 1              |                    |                          | l .                      | İ                    | 1                |                  |
| .7924          | 47 7695            | 2 5586                   | 5 8876                   | .6100 0184           | 2 1380           | .2076            |
| .7925<br>.7926 | 51 2634<br>54 7582 | 1 7436<br>0 9283         | 5 1665<br>4 4450         | .6098 7191<br>7 4195 | 2 3502<br>2 5622 | . 2075<br>. 2074 |
|                |                    | l                        | l .                      | l                    |                  |                  |
| .7927<br>.7928 | 58 2541<br>61 7510 | .2860 1127<br>.2859 2967 | 3 7231<br>3 0009         | 6 1193<br>4 8188     | 2 7742<br>2 9860 | . 2073<br>. 2072 |
| .7929          | 65 2488            | 8 4803                   | 2 2782                   | 3 5178               | 3 1978           | .2071            |
| .7930          | .8168 7477         | .2857 6636               | .4051 5553               | .6092 2163           | .9783 4094       | .2070            |
| .7931          | 72 2476            | 6 8466                   | 0 8319                   | .6090 9145           | 3 6210           | . 2069           |
| .7932          | 75 7484            | 6 0292                   | .4050 1081               | .6089 6121           | 3 8324           | .2068            |
| .7933          | 79 2503            | 5 2114                   | .4049 3840               | 8 3094               | 4 0437           | . 2067           |
| .7934          | 82 7532            | 4 3933                   | 8 6595                   | 7 0062               | 4 2549           | . 2066           |
| .7935          | 86 2570            | 3 5749                   | 7 9347                   | 5 7025               | 4 4660           | . 2065           |
| . 7936         | 89 7619            | 2 7561                   | 7 2094                   | 4 3984               | 4 6770           | . 2064           |
| . 7937         | 93 2678            | 1 9369                   | 6 4838                   | 3 0939               | 4 8879           | . 2063           |
| .7938          | .8196 7747         | 1 1174                   | 5 7578                   | 1 7889               | 5 0987           | . 2062           |
| .7939          | .8200 2826         | .2850 2975               | 5 0314                   | .6080 4835           | 5 3093           | .2061            |
| .7940          | .8203 7915         | .2849 4773               | .4044 3046               | .6079 1776           | .9785 5199       | .2060            |
| .7941          | 07 3014            | 8 6568                   | 3 5775                   | 7 8713               | 5 7304           | .2059            |
| .7942          | 10 8123            | 7 8359                   | 2 8500                   | 6 5645               | 5 9407           | .2058            |
| .7943          | 14 3243            | 7 0146                   | 2 1221                   | 5 2573               | 6 1510           | .2057            |
| .7944          | 17 8372            | 6 1930                   | 1 3938                   | 3 9496               | 6 3611           | .2056            |
| .7945<br>.7946 | 21 3512            | 5 3711                   | .4040 6652               | 2 6415               | 6 5712           | .2055            |
| i i            | 24 8662            | 4 5487                   | .4039 9361               | 1 3330               | 6 7811           | .2054            |
| .7947          | 28 3822            | 3 7261                   | 9 2067                   | .6070 0240           | 6 9909           | .2053            |
| .7948<br>.7949 | 31 8992<br>35 4172 | 2 9031<br>2 0797         | 8 4769<br>7 7468         | .6068 7145<br>7 4046 | 7 2006<br>7 4102 | .2052<br>.2051   |
|                |                    |                          |                          |                      |                  |                  |
| .7950          | .8238 9363         | .2841 2560               | .4037 0162               | .6066 0943           | .9787 6197       | .2050            |

E-11= E<sup>11</sup>=.0000,0001 .0000,0000+ .0000,0000+ .0000,0001 .0000,0000+

| p              | x                     | z                    | √pq                  | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q      |
|----------------|-----------------------|----------------------|----------------------|--------------------------|----------------------|--------|
| .7950          | .8238 9363            | .2841 2560           | .4037 0162           | .6066 0943               | .9787 6197           | .2050  |
| .7951          | 42 4564               | .2840 4319           | 6 2853               | 4 7835                   | 7 8291               | .2049  |
| .7952          | 45 9775               | .2839 6075           | 5 5540               | 3 4723                   | 8 0384               | .2048  |
| .7953          | 49 4996               | 8 7827               | 4 8223               | 2 1606                   | 8 2476               | .2047  |
| .7954          | 53 0228               | 7 9576               | 4 0902               | .6060 8485               | 8 4567               | .2046  |
| .7955          | 56 5469               | 7 1321               | 3 3578               | .6059 5359               | 8 6656               | .2045  |
| .7956          | 60 0721               | 6 3063               | 2 6250               | 8 2228                   | 8 8745               | .2044  |
| .7957          | 63 5984               | 5 4801               | 1 8917               | 6 9094                   | 9 0833               | .2043  |
| .7958<br>.7959 | 67 1256<br>70 6539    | 4 6536<br>3 8267     | 1 1581<br>.4030 4242 | 5 5954<br>4 2810         | 9 2919<br>9 5004     | .2042  |
|                |                       |                      |                      |                          |                      |        |
| .7960          | .8274 1832            | .2832 9994           | .4029 6898           | .6052 9662               | .9789 7089           | .2040  |
| .7961          | 77 7135               | 2 1718               | 8 9551               | 1 6509                   | .9789 9172           | .2039  |
| .7962<br>.7963 | 81 2449<br>84 7773    | 1 3439<br>.2830 5156 | 8 2200<br>7 4845     | .6050 3352<br>.6049 0190 | .9790 1254<br>0 3335 | .2038  |
| 1 1            |                       |                      | Ī                    | ĺ                        |                      | .2037  |
| .7964<br>.7965 | 88 3108<br>91 8453    | .2829 6869<br>8 8579 | 6 7486<br>6 0123     | 7 7024<br>6 3853         | 0 5416<br>0 7495     | .2036  |
| .7966          | 95 3808               | 8 0286               | 5 2756               | 5 0677                   | 0 7493               | .2035  |
| .7967          | .8298 9173            | 7 1989               | 4 5386               | 3 7497                   |                      | l      |
| .7968          | .8302 4549            | 6 3688               | 3 8012               | 2 4313                   | 1 1649<br>1 3725     | .2033  |
| .7969          | 05 9935               | 5 5384               | 3 0634               | .6041 1124               | 1 5800               | .2031  |
| .7970          | .8309 5332            | .2824 7076           | .4022 3252           | .6039 7930               | .9791 7874           | .2030  |
| .7971          | 13 0739               | 3 8765               | 1 5866               | 8 4732                   | 1 9946               | .2029  |
| .7972          | 16 6157               | 3 0450               | 0 8477               | 7 1530                   | 2 2018               | . 2028 |
| .7973          | 20 1585               | 2 2131               | .4020 1083           | 5 8323                   | 2 4088               | .2027  |
| .7974          | 23 7023               | 1 3809               | .4019 3686           | 4 5111                   | 2 6158               | .2026  |
| .7975          | 27 2472               | .2820 5484           | 8 6285               | 3 1895                   | 2 8226               | .2025  |
| . 7976         | 30 7931               | .2819 7155           | 7 8880               | 1 8674                   | 3 0294               | . 2024 |
| .7977          | 34 3401               | 8 8822               | 7 1471               | .6030 5448               | 3 2360               | .2023  |
| .7978<br>.7979 | 37 8881<br>41 4372    | 8 0486<br>7 2147     | 6 4059<br>5 6642     | .6029 2218<br>7 8984     | 3 4425<br>3 6489     | .2022  |
| .7980          | .8344 9873            | .2816 3803           | .4014 9222           | .6026 5745               | .9793 8552           | .2020  |
| .7981          | 48 5385               | 5 5457               | 4 1797               | 5 2501                   | 4 0614               | .2019  |
| 7982           | 52 0907               | 4 7106               | 3 4369               | 3 9253                   | 4 2675               | .2018  |
| .7983          | 55 6440               | 3 8752               | 2 6937               | 2 6000                   | 4 4735               | .2017  |
| .7984          | 59 1984               | 3 0395               | 1 9501               | .6021 2743               | 4 6794               | .2016  |
| .7985          | 62 7538               | 2 2034               | 1 2062               | .6019 9481               | 4 8851               | .2015  |
| .7986          | 66 3103               | 1 3669               | .4010 4618           | 8 6214                   | 5 0908               | .2014  |
| .7987          | 69 8678               | .2810 5301           | .4009 7171           | 7 2943                   | 5 2964               | .2013  |
| .7988          | 73 4264               | . 2809 6930          | 8 9719               | 5 9668<br>4 6387         | 5 5018<br>5 7072     | .2012  |
| .7989          | 76 9860<br>.8380 5467 | 8 8555<br>.2808 0176 | 8 2264               | .6013 3102               | .9795 9124           | .2011  |
| .7990          |                       |                      |                      |                          |                      | .2010  |
| .7991<br>.7992 | 84 1085<br>87 6713    | 7 1793<br>6 3408     | 6 7342<br>5 9875     | 1 9813<br>.6010 6519     | 6 1175<br>6 3226     | .2009  |
| .7993          | 91 2352               | 5 5018               | 5 2404               | .6009 3220               | 6 5275               | .2007  |
| .7994          | 94 8001               | 4 6625               | 4 4930               | 7 9917                   | 6 7323               | .2006  |
| .7995          | .8398 3662            | 3 8228               | 3 7451               | 6 6609                   | 6 9370               | .2005  |
| .7996          | .8401 9333            | 2 9828               | 2 9969               | 5 3296                   | 7 1416               | .2004  |
| .7997          | 05 5014               | 2 1425               | 2 2482               | 3 9979                   | 7 3461               | .2003  |
| .7998          | 09 0706               | 1 3017               | 1 4992               | 2 6657                   | 7 5505               | .2002  |
| .7999          | 12 6409               | . 2800 4606          | 0 7498               | 1 3331                   | 7 7548               | . 2001 |
| .8000          | .8416 2123            | .2799 6192           | .4000 0000           | .6000 0000               | .9797 9590           | .2000  |

ε<sup>-ii</sup>= ε<sup>ii</sup>=.0000,0001 .0000,0000+ .0000,0000+ .0000,0001 .0000,0000+ .0000,0001

.8000 .2000

| p     | x               | z           | √pq        | $\sqrt{1-p^2}$          | $\sqrt{1-q^2}$ | q      |
|-------|-----------------|-------------|------------|-------------------------|----------------|--------|
| .8000 | .8416 2123      | .2799 6192  | .4000 0000 | .6000 0000              | .9797 9590     | .2000  |
| .8001 | 19 7848         | 8 7774      | .3999 2498 | .5998 6664              | 8 1630         | .1999  |
| .8002 | 23 3583         | 7 9352      | 8 4992     | 7 3324                  | 8 3670         | .1998  |
| .8003 | 26 9329         | 7 0927      | 7 7482     | 5 9979                  | 8 5709         | .1997  |
| .8004 | 30 5086         | 6 2499      | 6 9969     | 4 6630                  | 8 7746         | .1996  |
| .8005 | 34 0854         | 5 4066      | 6 2451     | 3 3275                  | 8 9783         | .1995  |
| .8006 | 37 6632         | 4 5630      | 5 4930     | 1 9917                  | 9 1818         | .1994  |
| .8007 | 41 2421         | 3 7191      | 4 7404     | .5990 6553              | 9 3852         | .1993  |
| .8008 | 44 8221         | 2 8748      | 3 9875     | .5989 3185              | 9 5886         | .1992  |
| .8009 | 48 4032         | 2 0301      | 3 2342     | 7 9812                  | 9 <b>7</b> 918 | .1991  |
| .8010 | .8451 9854      | . 2791 1851 | .3992 4804 | .5986 6435              | .9799 9949     | .1990  |
| .8011 | 55 5686         | .2790 3397  | 1 7263     | 5 3053                  | .9800 1979     | .1989  |
| .8012 | 59 1530         | .2789 4940  | 0 9718     | 3 9666                  | 0 4008         | .1988  |
| .8013 | 62 <b>7</b> 384 | 8 6479      | .3990 2169 | 2 6274                  | 0 6036         | .1987  |
| .8014 | 66 3249         | 7 8015      | .3989 4616 | .5981 2878              | 0 8063         | .1986  |
| .8015 | 69 9125         | 6 9546      | 8 7059     | .5979 9477              | 1 0089         | .1985  |
| .8016 | 73 5012         | 6 1075      | 7 9498     | 8 6072                  | 1 2114         | .1984  |
| .8017 | 77 0910         | 5 2599      | 7 1934     | 7 2662                  | 1 4137         | . 1983 |
| .8018 | 80 6819         | 4 4121      | 6 4365     | 5 9247                  | 1 6160         | . 1982 |
| .8019 | 84 2738         | 3 5638      | 5 6792     | 4 5827                  | 1 8181         | . 1981 |
| .8020 | .8487 8669      | .2782 7152  | .3984 9216 | .5973 2403              | .9802 0202     | .1980  |
| .8021 | 91 4611         | 1 8662      | 4 1635     | 1 8974                  | 2 2221         | .1979  |
| .8022 | 95 0563         | 1 0169      | 3 4051     | .5970 5541              | 2 4240         | .1978  |
| .8023 | .8498 6527      | .2780 1672  | 2 6462     | . <del>5</del> 969 2102 | 2 6257         | .1977  |
| .8024 | .8502 2501      | .2779 3172  | 1 8870     | 7 8660                  | 2 8273         | .1976  |
| .8025 | 05 8487         | 8 4668      | 1 1274     | 6 5212                  | 3 0289         | .1975  |
| .8026 | 09 4483         | 7 6160      | .3980 3673 | 5 1759                  | 3 2303         | .1974  |
| .8027 | 13 0491         | 6 7649      | .3979 6069 | 3 8302                  | 3 4316         | .1973  |
| .8028 | 16 6510         | 5 9134      | 8 8461     | 2 4840                  | 3 6328         | .1972  |
| .8029 | 20 2539         | 5 0615      | 8 0848     | .5961 1374              | 3 8339         | .1971  |
| .8030 | .8523 8580      | .2774 2093  | .3977 3232 | .5959 7903              | .9804 0349     | .1970  |
| .8031 | 27 4632         | 3 3568      | 6 5612     | 8 4427                  | 4 2358         | .1969  |
| .8032 | 31 0695         | 2 5039      | 5 7988     | 7 0946                  | 4 4365         | .1968  |
| .8033 | 34 6769         | 1 6506      | 5 0360     | 5 7460                  | 4 6372         | .1967  |
| .8034 | 38 2854         | .2770 7969  | 4 2728     | 4 3970                  | 4 8378         | .1966  |
| .8035 | 41 8950         | .2769 9429  | 3 5092     | 3 0475                  | 5 0382         | .1965  |
| .8036 | 45 5058         | 9 0885      | 2 7451     | 1 6976                  | 5 2386         | .1964  |
| .8037 | 49 1176         | 8 2338      | 1 9807     | .5950 3471              | 5 4388         | .1963  |
| .8038 | 52 7306         | 7 3787      | 1 2159     | .5948 9962              | 5 6390         | .1962  |
| .8039 | 56 3447         | 6 5233      | .3970 4507 | 7 6448                  | 5 8390         | .1961  |
| .8040 | .8559 9599      | . 2765 6674 | .3969 6851 | .5946 2930              | .9806 0390     | .1960  |
| .8041 | 63 5762         | 4 8113      | 8 9191     | 4 9406                  | 6 2388         | .1959  |
| .8042 | 67 1936         | 3 9547      | 8 1527     | 3 5878                  | 6 4385         | .1958  |
| .8043 | 70 8122         | 3 0978      | 7 3859     | 2 2345                  | 6 6381         | .1957  |
| .8044 | 74 4319         | 2 2406      | 6 6187     | .5940 8807              | 6 8376         | .1956  |
| .8045 | 78 0527         | 1 3829      | 5 8511     | .5939 5265              | 7 0370         | .1955  |
| .8046 | 81 6746         | .2760 5250  | 5 0831     | 8 1718                  | 7 2363         | .1954  |
| .8047 | 85 2977         | .2759 6666  | 4 3147     | 6 8166                  | 7 4355         | .1953  |
| .8048 | 88 9219         | 8 8079      | 3 5459     | 5 4609                  | 7 6346         | .1952  |
| .8049 | 92 5472         | 7 9488      | 2 7767     | 4 1047                  | 7 8336         | .1951  |
| .8050 | .8596 1736      | .2757 0894  | .3962 0071 | .5932 7481              | .9808 0324     | .1950  |

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| p     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|------------|----------------|----------------|--------|
| .8050 | .8596 1736 | .2757 0894 | .3962 0071 | .5932 7481     | .9808 0324     | .1950  |
| .8051 | .8599 8012 | 6 2296     | 1 2371     | 1 3910         | 8 2312         | . 1949 |
| .8052 | .8603 4299 | 5 3694     | .3960 4666 | .5930 0334     | 8 4298         | . 1948 |
| .8053 | 07 0597    | 4 5089     | .3959 6958 | .5928 6753     | 8 6284         | . 1947 |
| .8054 | 10 6907    | 3 6480     | 8 9246     | 7 3168         | 8 8268         | .1946  |
| .8055 | 14 3228    | 2 7868     | 8 1530     | 5 9577         | 9 0252         | .1945  |
| .8056 | 17 9561    | 1 9251     | 7 3810     | 4 5982         | 9 2234         | .1944  |
| .8057 | 21 5905    | 1 0632     | 6 6085     | 3 2382         | 9 4215         | .1943  |
| .8058 | 25 2260    | .2750 2008 | 5 8357     | 1 8777         | 9 6196         | .1942  |
| .8059 | 28 8627    | .2749 3381 | 5 0625     | .5920 5168     | .9809 8175     | .1941  |
| .8060 | .8632 5005 | .2748 4751 | .3954 2888 | .5919 1553     | .9810 0153     | .1940  |
| .8061 | 36 1395    | 7 6116     | 3 5148     | 7 7934         | 0 2130         | .1939  |
| .8062 | 39 7796    | 6 7478     | 2 7403     | 6 4310         | 0 4106         | .1938  |
| .8063 | 43 4208    | 5 8837     | 1 9655     | 5 0681         | 0 6081         | .1937  |
| .8064 | 47 0632    | 5 0191     | 1 1902     | 3 7048         | 0 8055         | .1936  |
| .8065 | 50 7067    | 4 1543     | .3950 4145 | 2 3409         | 1 0028         | .1935  |
| .8066 | 54 3514    | 3 2890     | .3949 6385 | .5910 9766     | 1 1999         | .1934  |
| .8067 | 57 9973    | 2 4234     | 8 8620     | .5909 6117     | 1 3970         | .1933  |
| .8068 | 61 6443    | 1 5574     | 8 0851     | 8 2464         | 1 5940         | .1932  |
| .8069 | 65 2924    | .2740 6911 | 7 3078     | 6 8806         | 1 7908         | .1931  |
| .8070 | .8668 9417 | .2739 8243 | .3946 5301 | .5905 5144     | .9811 9876     | .1930  |
| .8071 | 72 5921    | 8 9573     | 5 7520     | 4 1476         | 2 1842         | .1929  |
| .8072 | 76 2437    | 8 0898     | 4 9735     | 2 7804         | 2 3808         | .1928  |
| .8073 | 79 8965    | 7 2220     | 4 1946     | 1 4126         | 2 5772         | .1927  |
| .8074 | 83 5504    | 6 3539     | 3 4153     | .5900 0444     | 2 7735         | .1926  |
| .8075 | 87 2055    | 5 4853     | 2 6355     | .5898 6757     | 2 9697         | .1925  |
| .8076 | 90 8617    | 4 6164     | 1 8554     | 7 3065         | 3 1659         | .1924  |
| .8077 | 94 5191    | 3 7471     | 1 0749     | 5 9368         | 3 3619         | .1923  |
| .8078 | .8698 1777 | 2 8775     | .3940 2939 | 4 5667         | 3 5578         | .1922  |
| .8079 | .8701 8374 | 2 0075     | .3939 5125 | 3 1960         | 3 7536         | .1921  |
| .8080 | .8705 4983 | .2731 1371 | .3938 7308 | .5891 8248     | .9813 9493     | .1920  |
| .8081 | 09 1604    | .2730 2664 | 7 9486     | .5890 4532     | 4 1448         | .1919  |
| .8082 | 12 8236    | .2729 3953 | 7 1660     | .5889 0811     | 4 3403         | .1918  |
| .8083 | 16 4880    | 8 5238     | 6 3830     | 7 7085         | 4 5357         | .1917  |
| .8084 | 20 1535    | · 7 6520   | 5 5996     | 6 3354         | 4 7310         | .1916  |
| .8085 | 23 8203    | 6 7798     | 4 8158     | 4 9618         | 4 9261         | .1915  |
| .8086 | 27 4882    | 5 9072     | 4 0315     | 3 5877         | 5 1212         | .1914  |
| .8087 | 31 1573    | 5 0343     | 3 2469     | 2 2131         | 5 3161         | .1913  |
| .8088 | 34 8275    | 4 1610     | 2 4618     | .5880 8380     | 5 5110         | .1912  |
| .8089 | 38 4990    | 3 2873     | 1 6764     | .5879 4625     | 5 7057         | .1911  |
| .8090 | .8742 1716 | .2722 4133 | .3930 8905 | .5878 0864     | .9815 9004     | .1910  |
| .8091 | 45 8454    | 1 5389     | .3930 1042 | 6 7099         | 6 0949         | .1909  |
| .8092 | 49 5204    | .2720 6641 | .3929 3175 | 5 3328         | 6 2893         | .1908  |
| .8093 | 53 1966    | .2719 7890 | 8 5304     | 3 9553         | 6 4836         | .1907  |
| .8094 | 56 8739    | 8 9135     | 7 7429     | 2 5773         | 6 6778         | .1906  |
| .8095 | 60 5525    | 8 0376     | 6 9549     | .5871 1988     | 6 8720         | .1905  |
| .8096 | 64 2322    | 7 1614     | 6 1666     | .5869 8198     | 7 0660         | .1904  |
| .8097 | 67 9131    | 6 2848     | 5 3778     | 8 4403         | 7 2599         | .1903  |
| .8098 | 71 5952    | 5 4078     | 4 5886     | 7 0603         | 7 4536         | .1902  |
| .8099 | 75 2785    | 4 5305     | 3 7991     | 5 6798         | 7 6473         | .1901  |
| .8100 | .8778 9630 | .2713 6528 | .3923 0090 | .5864 2988     | .9817 8409     | .1900  |

E-II EII-.0000,0002 .0000,0000+ .0000,0001 .0000,0001 .0000,0000+

| .8100          |                    |                          | 4                        | <b>41</b> -2     | 1 -2             | .1900            |
|----------------|--------------------|--------------------------|--------------------------|------------------|------------------|------------------|
| P              | <u> </u>           | Z                        | <i><b>1</b>pq</i>        | √1-p²            | √1-q²            | <b>q</b>         |
| .8100          | .8778 9630         | .2713 6528               | .3923 0090               | .5864 2988       | .9817 8409       | .1900            |
| .8101          | 82 6487<br>86 3355 | 2 7747<br>1 8962         | 2 2186<br>1 4278         | 2 9173<br>1 5353 | 8 0344<br>8 2277 | .1899<br>.1898   |
| .8102<br>.8103 | 90 0236            | 1 0174                   | .3920 6366               | .5860 1528       | 8 4210           | .1897            |
| .8104          | 93 7128            | .2710 1382               | .3919 8449               | .5858 7698       | 8 6142           | .1896            |
| .8105          | .8797 4033         | .2709 2587               | 9 0528                   | 7 3864           | 8 8072           | . 1895           |
| .8106          | .8801 0949         | 8 3787                   | 8 2603                   | 6 0024           | 9 0002           | .1894            |
| .8107          | 04 7878            | 7 4984                   | 7 4674                   | 4 6179<br>3 2330 | 9 1930<br>9 3857 | . 1893<br>. 1892 |
| .8108<br>.8109 | 08 4818<br>12 1770 | 6 6178<br>5 7367         | 6 6741<br>5 8804         | 1 8475           | 9 5784           | .1891            |
| .8110          | .8815 8735         | .2704 8553               | .3915 0862               | .5850 4615       | .9819 7709       | .1890            |
| .8111          | 19 5712            | 3 9736                   | 4 2916                   | .5849 0751       | .9819 9633       | . 1889           |
| .8112          | 23 2700            | 3 0914                   | 3 4966                   | 7 6881           | .9820 1556       | .1888            |
| .8113          | 26 9701            | 2 2089                   | 2 7012                   | 6 3006           | 0 3478           | . 1887           |
| .8114          | 30 6714            | 1 3260                   | 1 9054                   | 4 9127           | 0 5399           | .1886            |
| .8115<br>.8116 | 34 3739<br>38 0776 | .2700 4428<br>.2699 5592 | 1 1092<br>.3910 3125     | 3 5242<br>2 1352 | 0.7319<br>0.9238 | . 1885<br>. 1884 |
| .8117          | 41 7825            | 8 6752                   | .3909 5154               | .5840 7458       | 1 1156           | .1883            |
| .8118          | 45 4886            | 7 7908                   | 8 7179                   | .5839 3558       | 1 3072           | .1882            |
| .8119          | 49 1959            | 6 9061                   | 7 9200                   | 7 9653           | 1 4988           | . 1881           |
| .8120          | .8852 9045         | .2696 0210               | .3907 1217               | .5836 5743       | .9821 6903       | .1880            |
| .8121          | 56 6143            | 5 1355                   | 6 3230                   | 5 1829           | 1 8816           | .1879            |
| .8122<br>.8123 | 60 3253<br>64 0375 | 4 2496<br>3 3634         | 5 5238<br>4 7242         | 3 7909<br>2 3984 | 2 0729<br>2 2640 | . 1878<br>. 1877 |
| .8124          | 67 7509            | 2 4768                   | 3 9242                   | .5831 0054       | 2 4551           | . 1876           |
| .8125          | 71 4656            | 1 5899                   | 3 1237                   | .5829 6119       | <b>2</b> 6460    | .1875            |
| .8126          | <b>7</b> 5 1815    | .2690 7025               | 2 3229                   | 8 2179           | 2 8369           | .1874            |
| .8127          | 78 8986            | .2689 8148               | 1 5216                   | 6 8234           | 3 0276           | .1873            |
| .8128<br>.8129 | 82 6169<br>86 3365 | 8 9268<br>8 0383         | .3900 7199<br>.3899 9178 | 5 4284<br>4 0329 | 3 2182<br>3 4087 | . 1872<br>. 1871 |
| .8130          | .8890 0573         | .2687 1495               | .3899 1153               | .5822 6369       | .9823 5991       | .1870            |
| .8131          | 93 7793            | 6 2603                   | 8 3123                   | .5821 2403       | 3 7894           | . 1869           |
| .8132          | .8897 5026         | 5 3707                   | 7 5089                   | .5819 8433       | 3 9796           | .1868            |
| .8133          | .8901 2271         | 4 4808                   | 6 7051                   | 8 4458           | 4 1697           | .1867            |
| .8134          | 04 9528            | 3 5905                   | 5 9009                   | 7 0477           | 4 3597           | .1866            |
| .8135<br>.8136 | 08 6798<br>12 4080 | 2 6998<br>1 8088         | 5 0963<br>4 2912         | 5 6491<br>4 2501 | 4 5496<br>4 7394 | .1865<br>.1864   |
| .8137          | 16 1374            | 0 9173                   | 3 4857                   | 2 8505           | 4 9291           | .1863            |
| .8138          | 19 8681            | .2680 0255               | 2 6798                   | 1 4504           | 5 1186           | .1862            |
| .8139          | 23 6000            | .2679 1334               | 1 8735                   | .5810 0498       | 5 3081           | .1861            |
| .8140          | .8927 3332         | .2678 2408               | .3891 0667               | .5808 6487       | .9825 4974       | .1860            |
| .8141          | 31 0676            | 7 3479                   | .3890 2595               | 7 2471           | 5 6867           | .1859            |
| .8142<br>.8143 | 34 8033<br>38 5402 | 6 4546<br>5 5609         | 3889 4519<br>8 6439      | 5 8450<br>4 4424 | 5 8758<br>6 0649 | .1858<br>.1857   |
| .8144          | 42 2784            | 4 6669                   | 7 8354                   | 3 0392           | 6 2538           | .1856            |
| .8145          | 46 0178            | 3 7725                   | 7 0265                   | 1 6355           | 6 4426           | .1855            |
| .8146          | 49 7584            | 2 8777                   | 6 2172                   | .5800 2314       | 6 6314           | .1854            |
| .8147          | 53 5003            | 1 9825                   | 5 4074                   | .5798 8267       | 6 8200           | .1853            |
| .8148<br>.8149 | 57 2435<br>60 9879 | 1 0870<br>.2670 1911     | 4 5973                   | 7 4215           | 7 0085<br>7 1969 | . 1852<br>. 1851 |
| ļ              |                    |                          | 3 7867                   | 6 0158           |                  |                  |
| .8150          | .8964 7336         | .2669 2948               | 1 .3882 9757             | .5794 6096       | .9827 3852       | .1850            |

E<sup>-11</sup>= E<sup>1</sup>-.0000,0002 .0000,0000+ .0000,0001 .0000,0001 .0000,0000+ .0000,0001

.8150 .1850

| .8120          |                       |                      |                      |                          |                      | .1850            |
|----------------|-----------------------|----------------------|----------------------|--------------------------|----------------------|------------------|
| p              | . <b>x</b>            | z                    | √pq                  | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$       | q                |
| .8150          | .8964 7336            | .2669 2948           | .3882 9757           | .5794 6096               | .9827 3852           | .1850            |
| .8151          | 68 4806               | 8 3981               | 2 1642               | 3 2028                   | 7 5734               | .1849            |
| .8152          | 72 2288               | 7 5011               | 1 3523               | 1 7956                   | 7 7615               | .1848            |
| .8153          | 75 9782               | 6 6037               | .3880 5400           | .5790 3878               | 7 9495               | . 1847           |
| .8154          | 79 7289               | 5 7059               | .3879 7273           | .5788 9795               | 8 1374               | .1846            |
| .8155          | 83 4809               | 4 8077               | 8 9142               | 7 5707                   | 8 3251               | .1845            |
| .8156          | 87 2342               | 3 9092               | 8 1006               | 6 1614                   | 8 5128               | .1844            |
| .8157          | 90 9887               | 3 0103               | 7 2866               | 4 7516                   | 8 7004               | . 1843           |
| .8158          | 94 7445               | 2 1110               | 6 4721               | 3 3412                   | 8 8878               | .1842            |
| .8159          | .8998 5016            | 1 2113               | 5 6572               | 1 9304                   | 9 0752               | . 1841           |
| .8160          | .9002 2599            | .2660 3113           | .3874 8419           | .5780 5190               | .9829 2624           | .1840            |
| .8161          | 06 0195               | .2659 4109           | 4 0262               | .5779 1071               | 9 4496               | .1839            |
| .8162          | 09 7804<br>13 5425    | 8 5101<br>7 6089     | 3 2100<br>2 3934     | 7 6947<br>6 2818         | 9 6366<br>.9829 8235 | . 1838           |
| .8163          |                       |                      |                      |                          |                      | .1837            |
| .8164<br>.8165 | 17 3059<br>21 0706    | 6 7074<br>5 8055     | 1 5764<br>.3870 7590 | 4 8683<br>3 4543         | .9830 0104<br>0 1971 | .1836            |
| .8166          | 24 8366               | 4 9032               | .3869 9411           | 2 0398                   | 0 3837               | .1834            |
| .8167          | 28 6038               | 4 0005               | 9 1228               | .5770 6248               | 0 5702               | .1833            |
| .8168          | 32 3 <b>724</b>       | 3 0975               | 8 3040               | .5769 2093               | 0 7566               | .1832            |
| .8169          | 36 1422               | 2 1940               | 7 4848               | 7 7933                   | 0 9429               | .1831            |
| .8170          | .9039 9133            | .2651 2902           | .3866 6652           | .5766 3767               | .9831 1291           | .1830            |
| .8171          | 43 6857               | .2650 3860           | 5 8452               | 4 9596                   | 1 3152               | . 1829           |
| .8172          | 47 4594               | .2649 4815           | 5 0247               | 3 5420                   | 1 5012               | .1828            |
| .8173          | 51 2343               | 8 5766               | 4 2038               | 2 1238                   | 1 6871               | . 1827           |
| .8174          | 55 0106               | 7 6712               | 3 3825               | .5760 7052               | 1 8729               | . 1826           |
| .8175          | 58 7881               | 6 7656               | 2 5607               | .5759 2860               | 2 0585               | .1825            |
| .8176          | 62 5670               | 5 8595               | 1 7385               | 7 8663                   | 2 2441               | .1824            |
| .8177          | 66 3471               | 4 9530               | 0 9158               | 6 4460                   | 2 4296               | .1823            |
| .8178          | 70 1285               | 4 0462               | .3860 0927           | 5 0253                   | 2 6149               | .1822            |
| .8179<br>.8180 | 73 9113<br>.9077 6953 | 3 1390               | .3859 2692           | 3 6040<br>.5752 1822     | 2 8002<br>.9832 9853 | .1821            |
|                |                       |                      |                      |                          |                      |                  |
| .8181          | 81 4806               | 1 3235<br>.2640 4151 | 7 6209               | .5750 7599               | 3 1703<br>3 3553     | .1819            |
| .8182<br>.8183 | 85 2673<br>89 0552    | .2639 5064           | 6 7961<br>5 9708     | .5749 3370<br>7 9136     | 3 5401               | . 1818<br>. 1817 |
| 1              |                       | l .                  | 1                    | i                        | l                    | [                |
| .8184<br>.8185 | 92 8445<br>.9096 6350 | 8 5973<br>7 6879     | 5 1451<br>4 3190     | 6 4897<br>5 0653         | 3 7248<br>3 9094     | .1816<br>.1815   |
| .8186          | .9100 4269            | 6 7780               | 3 4924               | 3 6403                   | 4 0940               | .1814            |
| .8187          | 04 2200               | 5 8678               | 2 6654               | 2 2148                   | 4 2784               | .1813            |
| .8188          | 08 0145               | 4 9572               | 1 8380               | .5740 7888               | 4 4627               | .1812            |
| .8189          | 11 8103               | 4 0462               | 1 0101               | .5739 3622               | 4 6469               | .1811            |
| .8190          | .9115 6074            | .2633 1348           | .3850 1818           | .5737 9352               | .9834 8310           | .1810            |
| .8191          | 19 4058               | 2 2230               | .3849 3531           | 6 5076                   | 5 0149               | .1809            |
| .8192          | 23 2055               | 1 3109               | 8 5239               | 5 0794                   | 5 1988               | .1808            |
| .8193          | 27 0066               | .2630 3984           | 7 6942               | 3 6508                   | 5 3826               | . 1807           |
| .8194          | 30 8089               | .2629 4855           | 6 8642               | 2 2216                   | 5 5663               | .1806            |
| .8195<br>.8196 | 34 6126               | 8 5722<br>7 6586     | 6 0337<br>5 2027     | .5730 7918<br>.5729 3616 | 5 7498<br>5 9333     | .1805            |
| i              | 38 4176               | 1                    | i                    |                          |                      |                  |
| .8197          | 42 2240               | 6 7446               | 4 3713               | 7 9308                   | 6 1167               | .1803            |
| .8198<br>.8199 | 46 0316<br>49 8406    | 5 8301<br>4 9153     | 3 5395<br>2 7072     | 6 4995<br>5 0676         | 6 2999<br>6 4831     | .1802            |
|                |                       |                      |                      |                          |                      |                  |
| .8200          | .9153 6509            | .2624 0002           | .3841 8745           | .5723 6352               | .9836 6661           | .1800            |

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.8200 .1800

| p              | x                  | z                    | √pq                      | $\sqrt{1-p^2}$       | $\sqrt{1-q^2}$   | q                |
|----------------|--------------------|----------------------|--------------------------|----------------------|------------------|------------------|
| .8200          | .9153 6509         | .2624 0002           | .3841 8745               | .5723 6352           | .9836 6661       | .1800            |
| .8201          | 57 4625            | 3 0846               | 1 0414                   | 2 2023               | 6 8490           | .1799            |
| .8202          | 61 2755            | 2 1687               | .3840 2078               | .5720 7688           | 7 0319           | .1798            |
| .8203          | 65 0898            | 1 2524               | .3839 3738               | .5719 3348           | 7• 2146          | .1797            |
| .8204          | 68 9054            | .2620 3357           | 8 5393                   | 7 9003               | 7 3972           | .1796            |
| .8205          | 72 7224            | .2619 4186           | 7 7044                   | 6 4653               | 7 5797           | .1795            |
| .8206          | 76 5408            | 8 5011               | 6 8690                   | 5 0297               | 7 7621           | .1794            |
| .8207          | 80 3604            | 7 5833               | 6 0332                   | 3 5935               | 7 9444           | .1793            |
| .8208          | 84 1814            | 6 6650               | 5 1970                   | 2 1569               | 8 1267           | .1792            |
| .8209          | 88 0037            | 5 7464               | 4 3603                   | .5710 7197           | 8 3087           | .1791            |
| .8210          | .9191 8274         | .2614 8274           | .3833 5232               | .5709 2819           | .9838 4907       | .1790            |
| .8211          | 95 6524            | 3 9081               | 2 6856                   | 7 8436               | 8 6726           | .1789            |
| .8212          | .9199 4787         | 2 9883<br>2 0682     | 1 8476<br>1 0091         | 6 4048<br>4 9655     | 8 8544<br>9 0361 | . 1788<br>. 1787 |
| .8213          | .9203 3064         |                      | 1                        |                      |                  |                  |
| .8214<br>.8215 | 07 1355<br>10 9660 | 1 1477<br>.2610 2267 | .3830 1702<br>.3829 3309 | 3 5256<br>2 0851     | 9 2177<br>9 3991 | . 1786<br>. 1785 |
| .8216          | 14 7977            | .2609 3055           | 8 4911                   | .5700 6442           | 9 5805           | .1784            |
| .8217          | 18 6308            | 8 3838               | 7 6508                   | .5699 2027           | 9 7617           | .1783            |
| .8218          | 22 4653            | 7 4617               | 6 8102                   | 7 7606               | .9839 9429       | .1782            |
| .8219          | 26 3011            | 6 5393               | 5 9690                   | 6 3180               | .9840 1239       | .1781            |
| .8220          | .9230 1383         | .2605 6165           | .3825 1274               | .5694 8749           | .9840 3049       | .1780            |
| .8221          | 33 9768            | 4 6933               | 4 2854                   | 3 4312               | 0 4857           | .1779            |
| .8222          | 37 8167<br>41 6580 | 3 7697<br>2 8457     | 3 4430<br>2 6000         | 1 9870<br>.5690 5422 | 0 6664<br>0 8471 | .1778<br>.1777   |
| .8223          |                    | 1                    |                          | (                    | 1                |                  |
| .8224<br>.8225 | 45 5006<br>49 3446 | 1 9213<br>0 9966     | 1 7567<br>0 9128         | .5689 0969<br>7 6511 | 1 0276<br>1 2080 | .1776<br>.1775   |
| .8226          | 53 1900            | .2600 0715           | .3820 0686               | 6 2047               | 1 3883           | .1774            |
| .8227          | 57 0367            | .2599 1460           | .3819 2239               | 4 7578               | 1 5685           | .1773            |
| .8228          | 60 8848            | 8 2201               | 8 3787                   | 3 3103               | 1 7486           | .1772            |
| .8229          | 64 7342            | 7 2938               | 7 5331                   | 1 8623               | 1 9286           | .1771            |
| .8230          | .9268 5851         | .2596 3671           | .3816 6870               | .5680 4137           | .9842 1085       | .1770            |
| .8231          | 72 4373            | 5 4401               | 5 8405                   | .5678 9646           | 2 2883           | . 1769           |
| .8232          | 76 2909            | 4 5126               | 4 9936                   | 7 5149               | 2 4680           | .1768            |
| .8233          | 80 1459            | 3 5848               | 4 1462                   | 6 0647               | 2 6476           | . 1767           |
| .8234          | 84 0023            | 2 6566               | 3 2983                   | 4 6140               | 2 8270           | .1766            |
| .8235<br>.8236 | 87 8600<br>91 7191 | 1 7280<br>.2590 7990 | 2 4500<br>1 6012         | 3 1627<br>1 7109     | 3 0064<br>3 1857 | .1765<br>.1764   |
| .8237          | 95 5797            | .2589 8697           | .3810 7520               | .5670 2585           | 3 3648           | .1763            |
| .8238          | .9299 4415         | 8 9399               | .3809 9024               | .5668 8055           | 3 5439           | .1762            |
| .8239          | .9303 3048         | 8 0098               | 9 0522                   | 7 3520               | 3 7228           | .1761            |
| .8240          | .9307 1695         | .2587 0793           | .3808 2017               | .5665 8980           | .9843 9017       | .1760            |
| .8241          | 11 0356            | 6 1483               | 7 3507                   | 4 4434               | 4 0804           | .1759            |
| .8242          | 14 9030            | 5 2171               | 6 4992                   | 2 9883               | 4 2590           | .1758            |
| .8243          | 18 7718            | 4 2854               | 5 6473                   | 1 5326               | 4 4376           | .1757            |
| .8244          | 22 6421<br>26 5137 | 3 3533               | 4 7949                   | .5660 0763           | 4 6160           | .1756            |
| .8245          | 26 5137<br>30 3868 | 2 4208<br>1 4880     | 3 9420<br>3 0887         | .5658 6195<br>7 1622 | 4 7943<br>4 9725 | .1755<br>.1754   |
| .8247          | 34 2612            | .2580 5548           | 2 2350                   | 5 7043               | 5 1506           | .1753            |
| .8248          | 38 1370            | .2579 6211           | 1 3808                   | 4 2458               | 5 3286           | .1752            |
| .8249          | 42 0143            | 8 6871               | .3800 5261               | 2 7868               | 5 5065           | .1751            |
| .8250          | .9345 8929         | .2577 7527           | .3799 6710               | .5651 3273           | .9845 6843       | .1750            |

E<sup>-1</sup>!= E<sup>1</sup>!=.0000,0002 .0000,0000+ .0000,0001 .0000,0001 .0000,0000+ .0000,0000

| P     | x          | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|------------|----------------|----------------|--------|
| .8250 | .9345 8929 | .2577 7527 | .3799 6710 | .5651 3273     | .9845 6843     | .1750  |
| .8251 | 49 7730    | 6 8180     | 8 8155     | .5649 8672     | 5 8620         | .1749  |
| .8252 | 53 6544    | 5 8828     | 7 9595     | 8 4065         | 6 0396         | .1748  |
| .8253 | 57 5373    | 4 9472     | 7 1030     | 6 9453         | 6 2171         | .1747  |
| .8254 | 61 4216    | 4 0113     | 6 2460     | 5 4835         | 6 3945         | .1746  |
| .8255 | 65 3073    | 3 0749     | 5 3886     | 4 0212         | 6 5717         | . 1745 |
| .8256 | 69 1944    | 2 1382     | 4 5308     | 2 5583         | 6 7489         | .1744  |
| .8257 | 73 0829    | 1 2011     | 3 6725     | .5641 0948     | 6 9260         | . 1743 |
| .8258 | 76 9728    | .2570 2636 | 2 8137     | .5639 6308     | 7 1029         | .1742  |
| .8259 | 80 8642    | .2569 3257 | 1 9545     | 8 1663         | 7 2798         | . 1741 |
| .8260 | .9384 7570 | .2568 3874 | .3791 0948 | .5636 7012     | .9847 4565     | .1740  |
| .8261 | 88 6512    | 7 4488     | .3790 2347 | 5 2355         | 7 6332         | .1739  |
| .8262 | 92 5468    | 6 5097     | .3789 3741 | <b>3 7693</b>  | 7 8097         | .1738  |
| .8263 | .9396 4439 | 5 5702     | 8 5130     | 2 3025         | 7 9861         | .1737  |
| .8264 | .9400 3424 | 4 6304     | 7 6515     | .5630 8351     | 8 1625         | .1736  |
| .8265 | 04 2423    | 3 6902     | 6 7895     | .5629 3672     | 8 3387         | . 1735 |
| .8266 | 08 1436    | 2 7496     | 5 9271     | 7 8987         | 8 5148         | .1734  |
| .8267 | 12 0464    | 1 8085     | 5 0642     | 6 4297         | 8 6908         | .1733  |
| .8268 | 15 9506    | .2560 8671 | 4 2008     | 4 9601         | 8 8667         | .1732  |
| .8269 | 19 8562    | .2559 9254 | 3 3370     | 3 4899         | 9 0425         | .1731  |
| .8270 | .9423 7633 | .2558 9832 | .3782 4727 | .5622 0192     | .9849 2182     | .1730  |
| .8271 | 27 6718    | 8 0406     | 1 6080     | .5620 5479     | 9 3938         | .1729  |
| .8272 | 31 5818    | 7 0976     | .3780 7428 | .5619 0761     | 9 5693         | .1728  |
| .8273 | 35 4932    | 6 1543     | .3779 8771 | 7 6037         | 9 7447         | .1727  |
| .8274 | 39 4061    | 5 2105     | 9 0110     | 6 1307         | .9849 9200     | .1726  |
| .8275 | 43 3204    | 4 2664     | 8 1444     | 4 6572         | .9850 0952     | .1725  |
| .8276 | 47 2361    | 3 3219     | 7 2773     | 3 1831         | 0 2703         | .1724  |
| .8277 | 51 1533    | 2 3770     | 6 4098     | 1 7084         | 0 4452         | .1723  |
| .8278 | 55 0719    | 1 4317     | 5 5418     | .5610 2332     | 0 6201         | .1722  |
| .8279 | 58 9920    | .2550 4859 | 4 6734     | .5608 7573     | 0 7948         | . 1721 |
| .8280 | .9462 9136 | .2549 5399 | .3773 8044 | .5607 2810     | .9850 9695     | .1720  |
| .8281 | 66 8366    | 8 5934     | 2 9351     | 5 8040         | 1 1440         | .1719  |
| .8282 | 70 7611    | 7 6465     | 2 0652     | 4 3265         | 1 3185         | .1718  |
| .8283 | 74 6870    | 6 6992     | 1 1949     | 2 8485         | 1 4928         | .1717  |
| .8284 | 78 6144    | 5 7515     | .3770 3241 | .5601 3698     | 1 6671         | .1716  |
| .8285 | 82 5432    | 4 8035     | .3769 4529 | .5599 8906     | 1 8412         | .1715  |
| .8286 | 86 4735    | 3 8550     | 8 5812     | 8 4108         | 2 0152         | .1714  |
| .8287 | 90 4053    | 2 9062     | 7 7090     | 6 9305         | 2 1891         | .1713  |
| .8288 | 94 3385    | 1 9570     | 6 8363     | 5 4496         | 2 3630         | .1712  |
| .8289 | .9498 2732 | 1 0073     | 5 9632     | 3 9681         | 2 5367         | .1711  |
| .8290 | .9502 2094 | .2540 0573 | .3765 0896 | .5592 4860     | .9852 7103     | .1710  |
| .8291 | 06 1471    | .2539 1069 | 4 2156     | .5591 0034     | 2 8838         | .1709  |
| .8292 | 10 0862    | 8 1561     | 3 3411     | .5589 5202     | 3 0572         | .1708  |
| .8293 | 14 0268    | 7 2049     | 2 4661     | 8 0364         | 3 2305         | .1707  |
| .8294 | 17 9689    | 6 2533     | 1 5906     | 6 5521         | 3 4037         | .1706  |
| .8295 | 21 9124    | 5 3013     | .3760 7147 | 5 0671         | 3 5768         | .1705  |
| .8296 | 25 8575    | 4 3489     | .3759 8383 | 3 5816         | 3 7497         | .1704  |
| .8297 | 29 8040    | 3 3961     | 8 9614     | 2 0956         | 3 9226         | .1703  |
| .8298 | 33 7520    | 2 4429     | 8 0841     | .5580 6089     | 4 0954         | .1702  |
| .8299 | 37 7015    | 1 4894     | 7 2063     | .5579 1217     | 4 2681         | .1701  |
| .8300 | .9541 6525 | .2530 5354 | .3756 3280 | .5577 6339     | .9854 4406     | .1700  |

E-11 E11-.0000,0002 .0000,0000+ .0000,0001 .0000,0001 .0000,0000+

.8300 .1700

| P              | x                        | z                    | √pq                      | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$           | q                |
|----------------|--------------------------|----------------------|--------------------------|--------------------------|--------------------------|------------------|
| .8300          | .9541 6525               | .2530 5354           | .3756 3280               | .5577 6339               | .9854 4406               | .1700            |
| .8301          | 45 6050                  | .2529 5810           | 5 4492                   | 6 1455                   | 4 6131                   | .1699            |
| .8302          | 49 5590                  | 8 6263               | 4 5700                   | 4 6566                   | 4 7854                   | .1698            |
| .8303          | 53 5144                  | 7 6711               | 3 6903                   | 3 1671                   | 4 9577                   | . 1697           |
| .8304          | 57 4714                  | 6 7156               | 2 8101                   | 1 6769                   | 5 1298                   | .1696            |
| .8305<br>.8306 | 61 4299<br>65 3898       | 5 7596<br>4 8033     | 1 9295<br>1 0484         | .5570 1863<br>.5568 6950 | 5 3019<br>5 4738         | .1695            |
| 1              |                          |                      |                          |                          |                          | .1694            |
| .8307<br>.8308 | 69 3513<br>73 3143       | 3 8465<br>2 8894     | .3750 1668<br>.3749 2847 | 7 2032<br>5 7107         | 5 6456<br>5 8174         | .1693<br>.1692   |
| .8309          | 77 2787                  | 1 9319               | 8 4022                   | 4 2177                   | 5 9890                   | .1691            |
| .8310          | .9581 2447               | .2520 9739           | .3747 5192               | .5562 7242               | .9856 1605               | .1690            |
| .8311          | 85 2122                  | .2520 0156           | 6 6357                   | .5561 2300               | 6 3319                   | .1689            |
| .8312          | 89 1811<br>93 1516       | .2519 0569<br>8 0978 | 5 7517<br>4 8673         | .5559 7352<br>8 2399     | 6 5032                   | .1688            |
| .8313          |                          |                      |                          |                          | 6 6744                   | . 1687           |
| .8314<br>.8315 | .9597 1236<br>.9601 0971 | 7 1383<br>6 1784     | 3 9824<br>3 0970         | 6 7440<br>5 2475         | 6 8455<br>7 0165         | . 1686<br>. 1685 |
| .8316          | 05 0722                  | 5 2181               | 2 2111                   | 3 7504                   | 7 1874                   | .1684            |
| .8317          | 09 0487                  | 4 2573               | 1 3248                   | 2 2528                   | 7 3582                   | .1683            |
| .8318<br>.8319 | 13 0268<br>17 0064       | 3 2962<br>2 3347     | .3740 4379<br>.3739 5506 | .5550 7545<br>.5549 2557 | 7 5289<br>7 6995         | . 1682<br>. 1681 |
| .8320          | .9620 9875               | .2511 3728           | .3738 6629               | .5547 7563               | .9857 8700               | .1680            |
| .8321          | 24 9702                  | .2510 4105           | 7 7746                   | 6 2563                   | 8 0403                   | . 1679           |
| .8322          | 28 9544                  | .2509 4478           | 6 8859                   | 4 7557                   | 8 2106                   | .1678            |
| .8323          | 32 9401                  | 8 4848               | 5 9967                   | 3 2545                   | 8 3807                   | . 1677           |
| .8324          | 36 9273                  | 7 5213               | 5 1070                   | 1 7528                   | 8 5508                   | .1676            |
| .8325<br>.8326 | 40 9161<br>44 9064       | 6 5574<br>5 5931     | 4 2168<br>3 3261         | .5540 2504<br>.5538 7475 | 8 7208<br>8 8906         | . 1675<br>. 1674 |
| .8327          | 48 8982                  | 4 6284               | 2 4350                   | 7 2440                   | 9 0604                   | .1673            |
| .8328          | 52 8916                  | 3 6633               | 1 5434                   | 5 7399                   | 9 2300                   | .1672            |
| .8329          | 56 8865                  | 2 6978               | .3730 6513               | 4 2352                   | 9 3995                   | . 1671           |
| .8330          | .9660 8830               | .2501 7319           | .3729 7587               | .5532 7299               | .9859 5690               | .1670            |
| .8331          | 64 8810<br>68 8805       | .2500 7656           | 8 8656                   | .5531 2240               | 9 7383                   | .1669            |
| .8332<br>.8333 | 72 8816                  | .2499 7989<br>8 8319 | 7 9721<br>7 0781         | .5529 7175<br>8 2105     | .9859 9075<br>.9860 0766 | . 1668<br>. 1667 |
| .8334          | 76 8843                  | 7 8644               | 6 1836                   | 6 7028                   | 0 2456                   | .1666            |
| .8335          | 80 8885                  | 6 8965               | 5 2886                   | 5 1946                   | 0 4145                   | .1665            |
| .8336          | 84 8942                  | 5 9282               | 4 3931                   | 3 6857                   | 0 5833                   | .1664            |
| .8337          | 88 9015                  | 4 9595               | 3 4971                   | 2 1763                   | 0 7521                   | .1663            |
| .8338<br>.8339 | 92 9104<br>.9696 9208    | 3 9904<br>3 0209     | 2 6007<br>1 7038         | .5520 6663<br>.5519 1556 | 0 9206<br>1 0891         | . 1662<br>. 1661 |
| .8340          | .9700 9328               | .2492 0510           | .3720 8064               | .5517 6444               | .9861 2575               | .1660            |
| .8341          | 04 9463                  | 1 0807               | .3719 9085               | 6 1326                   | 1 4258                   | . 1659           |
| .8342          | 08 9614                  | .2490 1100           | 9 0101                   | 4 6202                   | 1 5940                   | . 1658           |
| .8343          | 12 9781                  | .2489 1389           | 8 1112                   | 3 1072                   | 1 7621                   | . 1657           |
| .8344<br>.8345 | 16 9963<br>21 0161       | 8 1674<br>7 1955     | 7 2119<br>6 3120         | 1 5936<br>.5510 0794     | 1 9300<br>2 0979         | . 1656<br>. 1655 |
| .8346          | 25 0375                  | 6 2232               | 5 4117                   | .5508 5646               | 2 2657                   | . 1654           |
| .8347          | 29 0605                  | 5 2505               | 4 5109                   | 7 0492                   | 2 4333                   | . 1653           |
| .8348          | 33 0850                  | 4 2774               | 3 6096                   | 5 5332                   | 2 6009                   | . 1652           |
| .8349          | 37 1111                  | 3 3039               | 2 7078                   | 4 0166                   | 2 7683                   | . 1651           |
| .8350          | .9741 1388               | .2482 3300           | .3711 8055               | .5502 4994               | .9862 9357               | .1650            |

ε<sup>-11</sup> ε<sup>11</sup> .0000,0002. .0000,0000+ .0000,0001 .0000,0001 .0000,0000+

| p     | x          | z          | √pq        | $\sqrt{1-p^2}$  | $\sqrt{1-q^2}$ | q      |
|-------|------------|------------|------------|-----------------|----------------|--------|
| .8350 | .9741 1388 | .2482 3300 | .3711 8055 | .5502 4994      | .9862 9357     | .1650  |
| .8351 | 45 1681    | 1 3557     | .3710 9027 | .5500 9816      | 3 1029         | .1649  |
| .8352 | 49 1989    | .2480 3810 | .3709 9995 | .5499 4632      | 3 2700         | .1648  |
| .8353 | 53 2313    | .2479 4058 | 9 0957     | 7 9443          | 3 4371         | .1647  |
| .8354 | 57 2654    | 8 4303     | 8 1915     | 6 4247          | 3 6040         | .1646′ |
| .8355 | 61 3010    | 7 4544     | 7 2867     | 4 9045          | 3 7708         | .1645  |
| .8356 | 65 3382    | 6 4781     | 6 3815     | 3 3837          | 3 9376         | .1644  |
| .8357 | 69 3770    | 5 5013     | 5 4758     | 1 8623          | 4 1042         | .1643  |
| .8358 | 73 4173    | 4 5242     | 4 5696     | .5490 3402      | 4 2707         | .1642  |
| .8359 | 77 4593    | 3 5466     | 3 6629     | .5488 8176      | 4 4371         | .1641  |
| .8360 | .9781 5029 | .2472 5687 | .3702 7557 | .5487 2944      | .9864 6034     | .1640  |
| .8361 | 85 5481    | 1 5903     | 1 8481     | 5 7706          | 4 7696         | .1639  |
| .8362 | 89 5949    | .2470 6116 | 0 9399     | 4 2462          | 4 9357         | .1638  |
| .8363 | 93 6432    | .2469 6324 | .3700 0312 | 2 7211          | 5 1017         | .1637  |
| .8364 | .9797 6932 | 8 6529     | .3699 1221 | .5481 1955      | 5 2676         | .1636  |
| .8365 | .9801 7448 | 7 6729     | 8 2124     | .5479 6692      | 5 4333         | .1635  |
| .8366 | 05 7980    | 6 6925     | 7 3023     | 8 1424          | 5 5990         | .1634  |
| .8367 | 09 8529    | 5 7117     | 6 3916     | 6 6149          | 5 7646         | .1633  |
| .8368 | 13 9093    | 4 7305     | 5 4805     | 5 0868          | 5 9301         | .1632  |
| .8369 | 17 9673    | 3 7489     | 4 5689     | 3 5582          | 6 0954         | .1631  |
| .8370 | .9822 0270 | .2462 7669 | .3693 6567 | .5472 0289      | .9866 2607     | .1630  |
| .8371 | 26 0883    | 1 7845     | 2 7441     | .5470 4990      | 6 4258         | .1629  |
| .8372 | 30 1512    | .2460 8017 | 1 8310     | .5468 9685      | 6 5909         | .1628  |
| .8373 | 34 2157    | .2459 8185 | 0 9174     | 7 43 <b>7</b> 3 | 6 7558         | .1627  |
| .8374 | 38 2819    | 8 8349     | .3690 0033 | 5 9056          | 6 9207         | .1626  |
| .8375 | 42 3496    | 7 8509     | .3689 0886 | 4 3732          | 7 0854         | .1625  |
| .8376 | 46 4190    | 6 8664     | 8 1735     | 2 8403          | 7 2501         | .1624  |
| .8377 | 50 4901    | 5 8816     | 7 2579     | .5461 3067      | 7 4146         | .1623  |
| .8378 | 54 5627    | 4 8963     | 6 3418     | .5459 7725      | 7 5790         | .1622  |
| .8379 | 58 6370    | 3 9107     | 5 4252     | 8 2377          | 7 7434         | .1621  |
| .8380 | .9862 7130 | .2452 9246 | .3684 5081 | .5456 7023      | .9867 9076     | .1620  |
| .8381 | 66 7906    | 1 9381     | 3 5905     | 5 1663          | 8 0717         | .1619  |
| .8382 | 70 8698    | .2450 9512 | 2 6724     | 3 6296          | 8 2357         | .1618  |
| .8383 | 74 9507    | .2449 9639 | 1 7538     | 2 0924          | 8 3996         | .1617  |
| .8384 | 79 0332    | 8 9762     | .3680 8347 | .5450 5545      | 8 5634         | .1616  |
| .8385 | 83 1173    | 7 9881     | .3679 9151 | .5449 0160      | 8 7271         | .1615  |
| .8386 | 87 2031    | 6 9996     | 8 9950     | 7 4768          | 8 8907         | .1614  |
| .8387 | 91 2906    | 6 0107     | 8 0744     | 5 9371          | 9 0542         | .1613  |
| .8388 | 95 3797    | 5 0214     | 7 1532     | 4 3968          | 9 2176         | .1612  |
| .8389 | .9899 4705 | 4 0316     | 6 2316     | 2 8558          | 9 3809         | .1611  |
| .8390 | .9903 5629 | .2443 0415 | .3675 3095 | .5441 3142      | .9869 5441     | .1610  |
| .8391 | 07 6570    | 2 0509     | 4 3869     | .5439 7720      | 9 7071         | .1609  |
| .8392 | 11 7528    | 1 0599     | 3 4638     | 8 2291          | .9869 8701     | .1608  |
| .8393 | 15 8502    | .2440 0686 | 2 5401     | 6 6857          | .9870 0330     | .1607  |
| .8394 | 19 9492    | .2439 0768 | 1 6160     | 5 1416          | 0 1957         | .1606  |
| .8395 | 24 0500    | 8 0846     | .3670 6914 | 3 5969          | 0 3584         | .1605  |
| .8396 | 28 1524    | 7 0920     | .3669 7662 | 2 0515          | 0 5210         | .1604  |
| .8397 | 32 2565    | 6 0989     | 8 8406     | .5430 5056      | 0 6834         | .1603  |
| .8398 | 36 3622    | 5 1055     | 7 9144     | .5428 9590      | 0 8458         | .1602  |
| .8399 | 40 4697    | 4 1117     | 6 9877     | 7 4118          | 1 0080         | .1601  |
| .8400 | .9944 5788 | .2433 1174 | .3666 0606 | .5425 8640      | .9871 1701     | .1600  |

E-11 E 11 .0000,0002 .0000,0000+ .0000,0001 .0000,0001 .0000,0000+

.8400 .1600

| p     | x                  | Z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|--------------------|------------|------------|----------------|----------------|-------|
| .8400 | .9944 5788         | .2433 1174 | .3666 0606 | .5425 8640     | .9871 1701     | .1600 |
| .8401 | 48 6896            | 2 1227     | 5 1329     | 4 3155         | 1 3322         | .1599 |
| .8402 | 52 8021            | 1 1277     | 4 2047     | 2 7665         | 1 4941         | .1598 |
| .8403 | 56 9162            | .2430 1322 | 3 2760     | .5421 2167     | 1 6559         | .1597 |
| .8404 | 61 0321            | .2429 1363 | 2 3468     | .5419 6664     | 1 8177         | .1596 |
| .8405 | 65 1496            | 8 1400     | 1 4171     | 8 1154         | 1 9793         | .1595 |
| .8406 | 69 2689            | 7 1433     | .3660 4869 | 6 5639         | 2 1408         | .1594 |
| .8407 | 73 3898            | 6 1461     | .3659 5561 | 5 0116         | 2 3022         | .1593 |
| .8408 | 77 5124            | 5 1486     | 8 6249     | 3 4588         | 2 4635         | .1592 |
| .8409 | 81 6367            | 4 1506     | 7 6931     | 1 9053         | 2 6247         | .1591 |
| .8410 | <b>.99</b> 85 7627 | .2423 1523 | .3656 7609 | .5410 3512     | .9872 7858     | .1590 |
| .8411 | 89 8904            | 2 1535     | 5 8281     | .5408 7964     | 2 9468         | .1589 |
| .8412 | 94 0198            | 1 1543     | 4 8948     | 7 2411         | 3 1077         | .1588 |
| .8413 | .9998 1509         | .2420 1547 | 3 9610     | 5 6851         | 3 2685         | .1587 |
| .8414 | 1.0002 2838        | .2419 1546 | 3 0267     | 4 1284         | 3 4292         | .1586 |
| .8415 | 06 4183            | 8 1542     | 2 0919     | 2 5711         | 3 5898         | .1585 |
| .8416 | 10 5546            | 7 1534     | 1 1565     | .5401 0132     | 3 7503         | .1584 |
| .8417 | 14 6925            | 6 1521     | .3650 2207 | .5399 4547     | 3 9106         | .1583 |
| .8418 | 18 8322            | 5 1504     | .3649 2843 | 7 8955         | 4 0709         | .1582 |
| .8419 | 22 9736            | 4 1483     | 8 3474     | 6 3357         | 4 2311         | .1581 |
| .8420 | 1.0027 1167        | .2413 1458 | .3647 4100 | .5394 7753     | .9874 3911     | .1580 |
| .8421 | 31 2615            | 2 1429     | 6 4721     | 3 2142         | 4 5511         | .1579 |
| .8422 | 35 4080            | 1 1396     | 5 5337     | 1 6524         | 4 7109         | .1578 |
| .8423 | 39 5563            | .2410 1358 | 4 5948     | .5390 0901     | 4 8707         | .1577 |
| .8424 | 43 7064            | .2409 1317 | 3 6553     | .5388 5271     | 5 0303         | .1576 |
| .8425 | 47 8581            | 8 1271     | 2 7153     | 6 9634         | 5 1899         | .1575 |
| .8426 | 52 0116            | 7 1221     | 1 7748     | 5 3991         | 5 3493         | .1574 |
| .8427 | 56 1668            | 6 1167     | .3640 8338 | 3 8342         | 5 5086         | .1573 |
| .8428 | 60 3237            | 5 1109     | .3639 8923 | 2 2687         | 5 6679         | .1572 |
| .8429 | 64 4824            | 4 1046     | 8 9503     | .5380 7025     | 5 8270         | .1571 |
| .8430 | 1.0068 6428        | .2403 0980 | .3638 0077 | .5379 1356     | .9875 9860     | .1570 |
| .8431 | 72 8050            | 2 0909     | 7 0646     | 7 5681         | 6 1449         | .1569 |
| .8432 | 76 9689            | 1 0834     | 6 1210     | 6 0000         | 6 3038         | .1568 |
| .8433 | 81 1345            | .2400 0755 | 5 1769     | 4 4312         | 6 4625         | .1567 |
| .8434 | 85 3019            | .2399 0672 | 4 2322     | 2 8618         | 6 6211         | .1566 |
| .8435 | 89 4711            | 8 0584     | 3 2871     | .5371 2917     | 6 7796         | .1565 |
| .8436 | 93 6420            | 7 0493     | 2 3414     | .5369 7210     | 6 9380         | .1564 |
| .8437 | 1.0097 8147        | 6 0397     | 1 3952     | 8 1497         | 7 0963         | .1563 |
| .8438 | 1.0101 9891        | 5 0297     | .3630 4485 | 6 5777         | 7 2545         | .1562 |
| .8439 | 06 1653            | 4 0193     | .3629 5012 | 5 0050         | 7 4126         | .1561 |
| .8440 | 1.0110 3433        | .2393 0085 | .3628 5534 | .5363 4317     | .9877 5706     | .1560 |
| .8441 | 14 5230            | 1 9972     | 7 6051     | 1 8578         | 7 7284         | .1559 |
| .8442 | 18 7045            | .2390 9856 | 6 6563     | .5360 2832     | 7 8862         | .1558 |
| .8443 | 22 8878            | .2389 9735 | 5 7070     | .5358 7080     | 8 0439         | .1557 |
| .8444 | 27 0728            | 8 9610     | 4 7571     | 7 1321         | 8 2015         | .1556 |
| .8445 | 31 2596            | 7 9481     | 3 8067     | 5 5555         | 8 3589         | .1555 |
| .8446 | 35 4482            | 6 9347     | 2 8558     | 3 9783         | 8 5163         | .1554 |
| .8447 | 39 6385            | 5 9210     | 1 9043     | 2 4005         | 8 6735         | .1553 |
| .8448 | 43 8307            | 4 9068     | .3620 9524 | .5350 8220     | 8 8307         | .1552 |
| .8449 | 48 0246            | 3 8922     | .3619 9999 | .5349 2428     | 8 9878         | .1551 |
| .8450 | 1.0152 2203        | .2382 8772 | .3619 0468 | .5347 6630     | .9879 1447     | .1550 |

E-II= EII=.0000,0002 .0000,0001 .0000,0001 .0000,0000+

.1550

.8450

| P     | x           | Z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .8450 | 1.0152 2203 | .2382 8772 | .3619 0468 | .5347 6630     | .9879 1447     | .1550 |
| .8451 | 56 4178     | 1 8618     | 8 0933     | 6 0826         | 9 3015         | .1549 |
| .8452 | 60 6171     | .2380 8459 | 7 1392     | 4 5015         | 9 4583         | .1548 |
| .8453 | 64 8182     | .2379 8297 | 6 1846     | 2 9197         | 9 6149         | .1547 |
| .8454 | 69 0211     | 8 8130     | 5 2295     | .5341 3373     | 9 7715         | .1546 |
| .8455 | 73 2258     | 7 7959     | 4 2738     | .5339 7542     | .9879 9279     | .1545 |
| .8456 | 77 4322     | 6 7783     | 3 3176     | 8 1705         | .9880 0842     | .1544 |
| .8457 | 81 6405     | 5 7604     | 2 3609     | 6 5861         | 0 2404         | .1543 |
| .8458 | 85 8506     | 4 7420     | 1 4036     | 5 0010         | 0 3966         | .1542 |
| .8459 | 90 0625     | 3 7232     | .3610 4458 | 3 4153         | 0 5526         | .1541 |
| .8460 | 1.0194 2762 | .2372 7040 | .3609 4875 | .5331 8290     | .9880 7085     | .1540 |
| .8461 | 1.0198 4917 | 1 7843     | 8 5286     | .5330 2419     | 0 8643         | .1539 |
| .8462 | 1.0202 7090 | .2370 7643 | 7 5693     | .5328 6542     | 1 0200         | .1538 |
| .8463 | 06 9282     | .2369 7438 | 6 6093     | 7 0659         | 1 1756         | .1537 |
| .8464 | 11 1491     | 8 7229     | 5 6489     | 5 4769         | 1 3311         | .1536 |
| .8465 | 15 3719     | 7 6016     | 4 6879     | 3 8872         | 1 4865         | .1535 |
| .8466 | 19 5965     | 6 5798     | 3 7264     | 2 2969         | 1 6418         | .1534 |
| .8467 | 23 8229     | 5 5577     | 2 7644     | .5320 7059     | 1 7970         | .1533 |
| .8468 | 28 0511     | 4 5351     | 1 8018     | .5319 1142     | 1 9520         | .1532 |
| .8469 | 32 2812     | 3 5120     | .3600 8387 | 7 5219         | 2 1070         | .1531 |
| .8470 | 1.0236 5131 | .2362 4886 | .3599 8750 | .5315 9289     | .9882 2619     | .1530 |
| .8471 | 40 7468     | 1 4647     | 8 9108     | 4 3352         | 2 4167         | .1529 |
| .8472 | 44 9824     | .2360 4405 | 7 9461     | 2 7409         | 2 5713         | .1528 |
| .8473 | 49 2199     | .2359 4157 | 6 9808     | .5311 1459     | 2 7259         | .1527 |
| .8474 | 53 4591     | 8 3906     | 6 0150     | .5309 5503     | 2 8803         | .1526 |
| .8475 | 57 7002     | 7 3651     | 5 0487     | 7 9539         | 3 0347         | .1525 |
| .8476 | 61 9432     | 6 3391     | 4 0818     | 6 3569         | 3 1890         | .1524 |
| .8477 | 66 1880     | 5 3127     | 3 1144     | 4 7593         | 3 3431         | .1523 |
| .8478 | 70 4346     | 4 2858     | 2 1464     | 3 1609         | 3 4972         | .1522 |
| .8479 | 74 6831     | 3 2586     | 1 1779     | .5301 5619     | 3 6511         | .1521 |
| .8480 | 1.0278 9335 | .2352 2309 | .3590 2089 | .5299 9623     | .9883 8049     | .1520 |
| .8481 | 83 1857     | 1 2028     | .3589 2393 | 8 3619         | 3 9587         | .1519 |
| .8482 | 87 4398     | .2350 1743 | 8 2692     | 6 7609         | 4 1123         | .1518 |
| .8483 | 91 6957     | .2349 1453 | 7 2986     | 5 1592         | 4 2658         | .1517 |
| .8484 | 1.0295 9535 | 8 1159     | 6 3274     | 3 5568         | 4 4193         | .1516 |
| .8485 | 1.0300 2132 | 7 0861     | 5 3556     | 1 9538         | 4 5726         | .1515 |
| .8486 | 04 4747     | 6 0559     | 4 3834     | .5290 3501     | 4 7258         | .1514 |
| .8487 | 08 7381     | 5 0252     | 3 4105     | .5288 7457     | 4 8789         | .1513 |
| .8488 | 13 0034     | 3 9941     | 2 4372     | 7 1406         | 5 0319         | .1512 |
| .8489 | 17 2706     | 2 9626     | 1 4632     | 5 5349         | 5 1848         | .1511 |
| .8490 | 1.0321 53%  | .2341 9307 | .3580 4888 | .5283 9285     | .9885 3376     | .1510 |
| .8491 | 25 8105     | .2340 8983 | .3579 5138 | 2 3214         | 5 4903         | .1509 |
| .8492 | 30 0833     | .2339 8655 | 8 5382     | .5280 7136     | 5 6429         | .1508 |
| .8493 | 34 3580     | 8 8323     | 7 5622     | .5279 1051     | 5 <b>7</b> 954 | .1507 |
| .8494 | 38 6346     | 7 7986     | 6 5855     | 7 4960         | 5 9478         | .1506 |
| .8495 | 42 9131     | 6 7646     | 5 6083     | 5 8862         | 6 1001         | .1505 |
| .8496 | 47 1934     | 5 7301     | 4 6306     | 4 2757         | 6 2523         | .1504 |
| .8497 | 51 4757     | 4 6951     | 3 6523     | 2 6645         | 6 4044         | .1503 |
| .8498 | 55 7599     | 3 6598     | 2 6735     | .5271 0526     | 6 5563         | .1502 |
| .8499 | 60 0459     | 2 6240     | 1 6941     | .5269 4401     | 6 7082         | .1501 |
| .8500 | 1.0364 3339 | .2331 5878 | .3570 7142 | .5267 8269     | .9886 8600     | .1500 |

E-IL EIL=.0000,0002 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

.1500 .8500

| p     | x           | z           | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q      |
|-------|-------------|-------------|------------|----------------|----------------|--------|
| .8500 | 1.0364 3339 | .2331 5878  | .3570 7142 | .5267 8269     | .9886 8600     | .1500  |
| .8501 | 68 6238     | .2330 5511  | .3569 7337 | 6 2130         | 7 0116         | .1499  |
| .8502 | 72 9156     | .2329 5140  | 8 7527     | 4 5984         | 7 1632         | .1498  |
| .8503 | 77 2093     | 8 4765      | 7 7712     | 2 9831         | 7 3147         | .1497  |
| .8504 | 81 5049     | 7 4386      | 6 7890     | .5261 3671     | 7 4660         | .1496  |
| .8505 | 85 8024     | 6 4002      | 5 8064     | .5259 7505     | 7 6173         | .1495  |
| .8506 | 90 1019     | 5 3614      | 4 8231     | 8 1331         | 7 7684         | .1494  |
| .8507 | 94 4032     | 4 3222      | 3 8394     | 6 5151         | 7 9194         | .1493  |
| .8508 | 1.0398 7065 | 3 2825      | 2 8550     | 4 8964         | 8 0704         | .1492  |
| .8509 | 1.0403 0118 | 2 2425      | 1 8702     | 3 2770         | 8 2212         | .1491  |
| .8510 | 1.0407 3189 | .2321 2019  | .3560 8847 | .5251 6569     | .9888 3720     | .1490  |
| .8511 | 11 6280     | .2320 1610  | .3559 8987 | .5250 0361     | 8 5226         | .1489  |
| .8512 | 15 9390     | .2319 1196  | 8 9122     | .5248 4146     | 8 6731         | .1488  |
| .8513 | 20 2519     | 8 0778      | 7 9251     | 6 7924         | 8 8235         | .1487  |
| .8514 | 24 5668     | 7 0356      | 6 9374     | 5 1696         | 8 9739         | .1486  |
| .8515 | 28 8836     | 5 9929      | 5 9492     | 3 5460         | 9 1241         | .1485  |
| .8516 | 33 2024     | 4 9498      | 4 9605     | 1 9218         | 9 2742         | .1484  |
| .8517 | 37 5231     | 3 9063      | 3 9712     | .5240 2968     | 9 4242         | . 1483 |
| .8518 | 41 8458     | 2 8623      | 2 9813     | .5238 6712     | 9 5741         | . 1482 |
| .8519 | 46 1704     | 1 8179      | 1 9909     | 7 0449         | 9 7239         | . 1481 |
| .8520 | 1.0450 4970 | .2310 7730  | .3550 9999 | .5235 4178     | .9889 8736     | .1480  |
| .8521 | 54 8255     | .2309 7278  | .3550 0083 | 3 7901         | .9890 0232     | .1479  |
| .8522 | 59 1560     | 8 6821      | .3549 0162 | 2 1617         | 0 1727         | .1478  |
| .8523 | 63 4885     | 7 6360      | 8 0235     | .5230 5326     | 0 3221         | .1477  |
| .8524 | 67 8229     | 6 5894      | 7 0303     | .5228 9028     | 0 4714         | .1476  |
| .8525 | 72 1593     | 5 5424      | 6 0365     | 7 2722         | 0 6206         | .1475  |
| .8526 | 76 4976     | 4 4950      | 5 0422     | 5 6410         | 0 7696         | .1474  |
| .8527 | 80 8380     | 3 4471      | 4 0473     | 4 0091         | 0 9186         | .1473  |
| .8528 | 85 1803     | 2 3988      | 3 0518     | 2 3765         | 1 0675         | .1472  |
| .8529 | 89 5245     | 1 3501      | 2 0558     | .5220 7431     | 1 2163         | .1471  |
| .8530 | 1.0493 8708 | .2300 3009  | .3541 0592 | .5219 1091     | .9891 3649     | .1470  |
| .8531 | 1.0498 2190 | . 2299 2513 | .3540 0620 | 7 4744         | 1 5135         | .1469  |
| .8532 | 1.0502 5693 | 8 2012      | .3539 0643 | 5 8390         | 1 6619         | .1468  |
| .8533 | 06 9215     | 7 1508      | 8 0660     | 4 2028         | 1 8103         | .1467  |
| .8534 | 11 2757     | 6 0999      | 7 0671     | 2 5660         | 1 9586         | .1466  |
| .8535 | 15 6319     | 5 0485      | 6 0677     | .5210 9284     | 2 1067         | .1465  |
| .8536 | 19 9901     | 3 9967      | 5 0678     | .5209 2902     | 2 2547         | .1464  |
| .8537 | 24 3504     | 2 9445      | 4 0672     | 7 6512         | 2 4027         | .1463  |
| .8538 | 28 7126     | 1 8919      | 3 0661     | 6 0115         | 2 5505         | .1462  |
| .8539 | 33 0768     | .2290 8388  | 2 0644     | 4 3711         | 2 6983         | .1461  |
| .8540 | 1.0537 4430 | .2289 7852  | .3531 0622 | .5202 7301     | .9892 8459     | .1460  |
| .8541 | 41 8112     | 8 7313      | .3530 0593 | .5201 0883     | 2 9934         | .1459  |
| .8542 | 46 1815     | 7 6769      | .3529 0560 | .5199 4457     | 3 1409         | .1458  |
| .8543 | 50 5537     | 6 6220      | 8 0520     | 7 8025         | 3 2882         | .1457  |
| .8544 | 54 9280     | 5 5668      | 7 0475     | 6 1586         | 3 4354         | .1456  |
| .8545 | 59 3043     | 4 5111      | 6 0424     | 4 5139         | 3 5825         | .1455  |
| .8546 | 63 6826     | 3 4549      | 5 0367     | 2 8686         | 3 7295         | .1454  |
| .8547 | 68 0630     | 2 3983      | 4 0305     | .5191 2225     | 3 8764         | .1453  |
| .8548 | 72 4454     | 1 3413      | 3 0237     | .5189 5757     | 4 0232         | .1452  |
| .8549 | 76 8298     | .2280 2838  | 2 0163     | 7 9282         | 4 1700         | .1451  |
| .8550 | 1.0581 2162 | .2279 2259  | .3521 0084 | .5186 2800     | .9894 3166     | .1450  |

E-IL EIL-0000,0003 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

| p     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .8550 | 1.0581 2162 | .2279 2259 | .3521 0084 | .5186 2800     | .9894 3166     | .1450 |
| .8551 | 85 6047     | 8 1676     | .3519 9999 | 4 6310         | 4 4630         | .1449 |
| .8552 | 89 9952     | 7 1088     | 8 9908     | 2 9814         | 4 6094         | .1448 |
| .8553 | 94 3877     | 6 0496     | 7 9811     | .5181 3310     | 4 7557         | .1447 |
| .8554 | 1.0598 7823 | 4 9899     | 6 9709     | .5179 6799     | 4 9019         | .1446 |
| .8555 | 1.0603 1790 | 3 9298     | 5 9600     | 8 0281         | 5 0480         | .1445 |
| .8556 | 07 5777     | 2 8693     | 4 9486     | 6 3756         | 5 1940         | .1444 |
| .8557 | 11 9784     | 1 8083     | 3 9367     | 4 7223         | 5 3399         | .1443 |
| .8558 | 16 3812     | .2270 7469 | 2 9241     | 3 0683         | 5 4856         | .1442 |
| .8559 | 20 7861     | .2269 6850 | 1 9110     | .5171 4136     | 5 6313         | .1441 |
| .8560 | 1.0625 1930 | .2268 6227 | .3510 8973 | .5169 7582     | .9895 7769     | .1440 |
| .8561 | 29 6020     | 7 5600     | .3509 8830 | 8 1021         | 5 9223         | .1439 |
| .8562 | 34 0131     | 6 4968     | 8 8682     | 6 4452         | 6 0677         | .1438 |
| .8563 | 38 4262     | 5 4332     | 7 8528     | 4 7876         | 6 2130         | .1437 |
| .8564 | 42 8414     | 4 3691     | 6 8368     | 3 1293         | 6 3581         | .1436 |
| .8565 | 47 2587     | 3 3046     | 5 8202     | .5161 4702     | 6 5032         | .1435 |
| .8566 | 51 6780     | 2 2397     | 4 8030     | .5159 8105     | 6 6481         | .1434 |
| .8567 | 56 0995     | 1 1743     | 3 7852     | 8 1500         | 6 7930         | .1433 |
| .8568 | 60 5230     | .2260 1085 | 2 7669     | 6 4887         | 6 9377         | .1432 |
| .8569 | 64 9486     | .2259 0422 | 1 7480     | 4 8268         | 7 0823         | .1431 |
| .8570 | 1.0669 3763 | .2257 9755 | .3500 7285 | .5153 1641     | .9897 2269     | .1430 |
| .8571 | 73 8061     | 6 9083     | .3499 7084 | .5151 5007     | 7 3713         | .1429 |
| .8572 | 78 2380     | 5 8407     | 8 6878     | .5149 8365     | 7 5156         | .1428 |
| .8573 | 82 6720     | 4 7727     | 7 6665     | 8 1716         | 7 6599         | .1427 |
| .8574 | 87 1081     | 3 7042     | 6 6447     | 6 5060         | 7 8040         | .1426 |
| .8575 | 91 5463     | 2 6352     | 5 6223     | 4 8396         | 7 9480         | .1425 |
| .8576 | 1.0695 9866 | 1 5659     | 4 5993     | 3 1726         | 8 0919         | .1424 |
| .8577 | 1.0700 4290 | .2250 4960 | 3 5757     | .5141 5047     | 8 2358         | .1423 |
| .8578 | 04 8735     | .2249 4258 | 2 5515     | .5139 8362     | 8 3795         | .1422 |
| .8579 | 09 3201     | 8 3551     | 1 5267     | 8 1669         | 8 5231         | .1421 |
| .8580 | 1.0713 7689 | .2247 2839 | .3490 5014 | .5136 4969     | .9898 6666     | .1420 |
| .8581 | 18 2198     | 6 2123     | .3489 4755 | 4 8261         | 8 8100         | .1419 |
| .8582 | 22 6728     | 5 1403     | 8 4489     | 3 1546         | 8 9533         | .1418 |
| .8583 | 27 1279     | 4 0678     | 7 4218     | .5131 4823     | 9 0965         | .1417 |
| .8584 | 31 5852     | 2 9949     | 6 3941     | .5129 8094     | 9 2396         | .1416 |
| .8585 | 36 0446     | 1 9215     | 5 3658     | 8 1356         | 9 3826         | .1415 |
| .8586 | 40 5061     | .2240 8476 | 4 3370     | 6 4612         | 9 5254         | .1414 |
| .8587 | 44 9697     | .2239 7734 | 3 3075     | 4 7859         | 9 6682         | .1413 |
| .8588 | 49 4355     | 8 6986     | 2 2774     | 3 1100         | 9 8109         | .1412 |
| .8589 | 53 9035     | 7 6235     | 1 2468     | .5121 4333     | .9899 9535     | .1411 |
| .8590 | 1.0758 3736 | .2236 5479 | .3480 2155 | .5119 7559     | .9900 0960     | .1410 |
| .8591 | 62 8459     | 5 4718     | .3479 1837 | 8 0777         | 0 2383         | .1409 |
| .8592 | 67 3203     | 4 3953     | 8 1512     | 6 3987         | 0 3806         | .1408 |
| .8593 | 71 7968     | 3 3183     | 7 1182     | 4 7191         | 0 5228         | .1407 |
| .8594 | 76 2755     | 2 2409     | 6 0846     | 3 0386         | 0 6648         | .1406 |
| .8595 | 80 7564     | 1 1631     | 5 0504     | .5111 3575     | 0 8068         | .1405 |
| .8596 | 85 2395     | .2230 0848 | 4 0155     | .5109 6755     | 0 9486         | .1404 |
| .8597 | 89 7247     | .2229 0060 | 2 9801     | 7 9929         | 1 0904         | .1403 |
| .8598 | 94 2121     | 7 9268     | 1 9441     | 6 3094         | 1 2320         | .1402 |
| .8599 | 1.0798 7017 | 6 8472     | .3470 9075 | 4 6253         | 1 3726         | .1401 |
| .8600 | 1.0803 1934 | .2225 7671 | .3469 8703 | .5102 9403     | .9901 5150     | .1400 |

E<sup>-1i</sup>= ε<sup>1i</sup>=.0000,0003 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

.8600 .1400

| p     | x           | z           | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|-------------|------------|----------------|----------------|-------|
| .8600 | 1.0803 1934 | .2225 7671  | .3469 8703 | .5102 9403     | .9901 5150     | .1400 |
| .8601 | 07 6873     | 4 6866      | 8 8325     | .5101 2546     | 1 6564         | .1399 |
| .8602 | 12 1834     | 3 6056      | 7 7941     | .5099 5682     | 1 7976         | .1398 |
| .8603 | 16 6817     | 2 5241      | 6 7551     | 7 8810         | 1 9387         | .1397 |
| .8604 | 21 1822     | 1 4422      | 5 7155     | 6 1931         | 2 0798         | .1396 |
| .8605 | 25 6849     | .2220 3599  | 4 6753     | 4 5044         | 2 2207         | .1395 |
| .8606 | 30 1898     | .2219 2771  | 3 6345     | 2 8149         | 2 3615         | .1394 |
| .8607 | 34 6969     | 8 1938      | 2 5931     | .5091 1247     | 2 5023         | .1393 |
| .8608 | 39 2061     | 7 1102      | 1 5511     | .5089 4338     | 2 6429         | .1392 |
| .8609 | 43 7176     | 6 0260      | .3460 5085 | 7 7420         | 2 7834         | .1391 |
| .8610 | 1.0848 2313 | .2214 9414  | .3459 4653 | .5086 0495     | .9902 9238     | .1390 |
| .8611 | 52 7472     | 3 8564      | 8 4215     | 4 3563         | 3 0641         | .1389 |
| .8612 | 57 2653     | 2 7709      | 7 3770     | 2 6623         | 3 2043         | .1388 |
| .8613 | 61 7856     | 1 6849      | 6 3320     | .5080 9675     | 3 3444         | .1387 |
| .8614 | 66 3082     | .2210 5985  | 5 2864     | .5079 2720     | 3 4844         | .1386 |
| .8615 | 70 8330     | .2209 5116  | 4 2401     | 7 5757         | 3 6243         | .1385 |
| .8616 | 75 3600     | 8 4243      | 3 1933     | 5 8786         | 3 7641         | .1384 |
| .8617 | 79 8892     | 7 3366      | 2 1459     | 4 1808         | 3 9038         | .1383 |
| .8618 | 84 4207     | 6 2484      | 1 0978     | 2 4822         | 4 0434         | .1382 |
| .8619 | 88 9544     | 5 1597      | .3450 0491 | .5070 7829     | 4 1829         | .1381 |
| .8620 | 1.0893 4903 | . 2204 0706 | .3448 9999 | .5069 0828     | .9904 3223     | .1380 |
| .8621 | 1.0898 0285 | 2 9810      | 7 9500     | 7 3819         | 4 4616         | .1379 |
| .8622 | 1.0902 5689 | 1 8910      | 6 8995     | 5 6802         | 4 6007         | .1378 |
| .8623 | 07 1115     | .2200 8005  | 5 8484     | 3 9778         | 4 7398         | .1377 |
| .8624 | 11 6565     | .2199 7095  | 4 7967     | 2 2746         | 4 8788         | .1376 |
| .8625 | 16 2037     | 8 6181      | 3 7443     | .5060 5706     | 5 0177         | .1375 |
| .8626 | 20 7531     | 7 5263      | 2 6914     | .5058 8659     | 5 1564         | .1374 |
| .8627 | 25 3048     | 6 4340      | 1 6378     | 7 1604         | 5 2951         | .1373 |
| .8628 | 29 8588     | 5 3412      | .3440 5837 | 5 4541         | 5 4337         | .1372 |
| .8629 | 34 4150     | 4 2480      | .3439 5289 | 3 7470         | 5 5721         | .1371 |
| .8630 | 1.0938 9735 | .2193 1544  | .3438 4735 | .5052 0392     | .9905 7105     | .1370 |
| .8631 | 43 5343     | 2 0602      | 7 4175     | .5050 3306     | 5 8487         | .1369 |
| .8632 | 48 0973     | .2190 9656  | 6 3609     | .5048 6212     | 5 9869         | .1368 |
| .8633 | 52 6627     | .2189 8706  | 5 3036     | 6 9110         | 6 1249         | .1367 |
| .8634 | 57 2303     | 8 7751      | 4 2458     | 5 2001         | 6 2629         | .1366 |
| .8635 | 61 8002     | 7 6792      | 3 1873     | 3 4884         | 6 4007         | .1365 |
| .8636 | 66 3724     | 6 5828      | 2 1282     | 1 7759         | 6 5384         | .1364 |
| .8637 | 70 9469     | 5 4859      | 1 0685     | .5040 0626     | 6 6761         | .1363 |
| .8638 | 75 5237     | 4 3886      | .3430 0082 | .5038 3485     | 6 8136         | .1362 |
| .8639 | 80 1028     | 3 2908      | .3428 9472 | 6 6337         | 6 9510         | .1361 |
| .8640 | 1.0984 6842 | .2182 1925  | .3427 8856 | .5034 9181     | .9907 0884     | .1360 |
| .8641 | 89 2679     | .2181 0938  | 6 8235     | 3 2017         | 7 2256         | .1359 |
| .8642 | 93 8539     | .2179 9947  | 5 7606     | .5031 4845     | 7 3627         | .1358 |
| .8643 | 1.0998 4423 | 8 8951      | 4 6972     | .5029 7665     | 7 4997         | .1357 |
| .8644 | 1.1003 0329 | 7 7950      | 3 6332     | 8 0477         | 7 6367         | .1356 |
| .8645 | 07 6259     | 6 6945      | 2 5685     | 6 3282         | 7 7735         | .1355 |
| .8646 | 12 2212     | 5 5935      | 1 5032     | 4 6078         | 7 9102         | .1354 |
| .8647 | 16 8188     | 4 4920      | .3420 4373 | 2 8867         | 8 0468         | .1353 |
| .8648 | 21 4187     | 3 3901      | .3419 3707 | .5021 1648     | 8 1833         | .1352 |
| .8649 | 26 0210     | 2 2877      | 8 3035     | .5019 4421     | 8 3197         | .1351 |
| .8650 | 1.1030 6256 | .2171 1849  | .3417 2357 | .5017 7186     | .9908 4560     | .1350 |

ε<sup>-1i</sup>= ε<sup>1i</sup>=.0000,0003 .0000,0001 .0000,0001 .0000,0000+ .0000,0000,0000

| p     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .8650 | 1.1030 6256 | .2171 1849 | .3417 2357 | .5017 7186     | .9908 4560     | .1350 |
| .8651 | 35 2325     | .2170 0816 | 6 1673     | 5 9943         | 8 5922         | .1349 |
| .8652 | 39 8418     | .2168 9779 | 5 0982     | 4 2692         | 8 7283         | .1348 |
| .8653 | 44 4535     | 7 8736     | 4 0286     | 2 5434         | 8 8643         | .1347 |
| .8654 | 49 0675     | 6 7690     | 2 9582     | .5010 8167     | 9 0002         | .1346 |
| .8655 | 53 6838     | 5 6638     | 1 8873     | .5009 0892     | 9 1359         | .1345 |
| .8656 | 58 3025     | 4 5582     | .3410 8157 | 7 3610         | 9 2716         | .1344 |
| .8657 | 62 9235     | 3 4522     | .3409 7435 | 5 6319         | 9 4072         | .1343 |
| .8658 | 67 5470     | 2 3456     | 8 6707     | 3 9021         | 9 5427         | .1342 |
| .8659 | 72 1727     | 1 2387     | 7 5972     | 2 1714         | 9 6780         | .1341 |
| .8660 | 1.1076 8009 | .2160 1312 | .3406 5232 | .5000 4400     | .9909 8133     | .1340 |
| .8661 | 81 4314     | .2159 0233 | 5 4484     | .4998 7077     | .9909 9485     | .1339 |
| .8662 | 86 0644     | 7 9149     | 4 3731     | 6 9747         | .9910 0836     | .1338 |
| .8663 | 90 6997     | 6 8061     | 3 2971     | 5 2408         | 0 2185         | .1337 |
| .8664 | 95 3373     | 5 6968     | 2 2205     | 3 5062         | 0 3534         | .1336 |
| .8665 | 1.1099 9774 | 4 5870     | 1 1432     | 1 7707         | 0 4881         | .1335 |
| .8666 | 1.1104 6199 | 3 4768     | .3400 0653 | .4990 0345     | 0 6228         | .1334 |
| .8667 | 09 2647     | 2 3661     | .3398 9868 | .4988 2974     | 0 7573         | .1333 |
| .8668 | 13 9120     | 1 2549     | 7 9076     | 6 5595         | 0 8918         | .1332 |
| .8669 | 18 5616     | .2150 1433 | 6 8278     | 4 8209         | 1 0261         | .1331 |
| .8670 | 1.1123 2137 | .2149 0312 | .3395 7473 | .4983 0814     | .9911 1604     | .1330 |
| .8671 | 27 8682     | 7 9187     | 4 6663     | .4981 3411     | 1 2945         | .1329 |
| .8672 | 32 5250     | 6 8057     | 3 5845     | .4979 6000     | 1 4286         | .1328 |
| .8673 | 37 1843     | 5 6922     | 2 5022     | 7 8581         | 1 5625         | .1327 |
| .8674 | 41 8460     | 4 5782     | 1 4192     | 6 1154         | 1 6963         | .1326 |
| .8675 | 46 5102     | 3 4638     | .3390 3355 | 4 3718         | 1 8301         | .1325 |
| .8676 | 51 1767     | 2 3489     | .3389 2512 | 2 6275         | 1 9637         | .1324 |
| .8677 | 55 8457     | 1 2336     | 8 1663     | .4970 8823     | 2 0972         | .1323 |
| .8678 | 60 5171     | .2140 1177 | 7 0807     | .4969 1363     | 2 2306         | .1322 |
| .8679 | 65 1910     | .2139 0015 | 5 9945     | 7 3896         | 2 3639         | .1321 |
| .8680 | 1.1169 8673 | .2137 8847 | .3384 9077 | .4965 6420     | .9912 4972     | .1320 |
| .8681 | 74 5460     | 6 7675     | 3 8202     | 3 8935         | 2 6303         | .1319 |
| .8682 | 79 2272     | 5 6498     | 2 7320     | 2 1443         | 2 7633         | .1318 |
| .8683 | 83 9109     | 4 5316     | 1 6432     | .4960 3942     | 2 8962         | .1317 |
| .8684 | 88 5970     | 3 4130     | .3380 5538 | .4958 6434     | 3 0290         | .1316 |
| .8685 | 93 2855     | 2 2939     | .3379 4637 | 6 8917         | 3 1617         | .1315 |
| .8686 | 1.1197 9765 | 1 1744     | 8 3730     | 5 1392         | 3 2943         | .1314 |
| .8687 | 1.1202 6700 | .2130 0543 | 7 2816     | 3 3858         | 3 4268         | .1313 |
| .8688 | 07 3660     | .2128 9338 | 6 1896     | .4951 6316     | 3 5592         | .1312 |
| .8689 | 12 0644     | 7 8129     | 5 0969     | .4949 8767     | 3 6915         | .1311 |
| .8690 | 1.1216 7653 | .2126 6914 | .3374 0036 | .4948 1209     | .9913 8237     | .1310 |
| .8691 | 21 4687     | 5 5695     | 2 9096     | 6 3642         | 3 9558         | .1309 |
| .8692 | 26 1745     | 4 4471     | 1 8149     | 4 6068         | 4 0878         | .1308 |
| .8693 | 30 8829     | 3 3243     | .3370 7197 | 2 8485         | 4 2196         | .1307 |
| .8694 | 35 5937     | 2 2009     | .3369 6237 | .4941 0894     | 4 3514         | .1306 |
| .8695 | 40 3071     | .2121 0771 | 8 5271     | .4939 3294     | 4 4831         | .1305 |
| .8696 | 45 0229     | .2119 9529 | 7 4299     | 7 5686         | 4 6147         | .1304 |
| .8697 | 49 7412     | 8 8281     | 6 3320     | 5 8070         | 4 7461         | .1303 |
| .8698 | 54 4621     | 7 7029     | 5 2334     | 4 0446         | 4 8775         | .1302 |
| .8699 | 59 1854     | 6 5772     | 4 1342     | 2 2813         | 5 0088         | .1301 |
| .8700 | 1.1263 9113 | .2115 4511 | .3363 0343 | .4930 5172     | .9915 1399     | .1300 |

 $\epsilon^{-i} \stackrel{!}{l} = \epsilon^{i} \stackrel{!}{l} \stackrel{!}{=} .0000,0003 \quad .0000,0001 \quad .0000,0001 \quad .0000,0001 \quad .0000,0000 + 0000,00001 \quad .0000,00001 \quad .00000,00001 \quad .0000,00001  \quad .0000,00001  \quad .0000,00001 \quad .0000000000000000000$ 

.8700 .1300

| .6700          |                            |                          |                          | <i>[</i>                 | .[2              | .1300          |
|----------------|----------------------------|--------------------------|--------------------------|--------------------------|------------------|----------------|
| P              | x                          | Z                        | √pq                      | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$   | q              |
| .8700          | 1.1263 9113                | .2115 4511               | .3363 0343               | .4930 5172               | .9915 1399       | .1300          |
| .8701          | 68 6397                    | 4 3245                   | 1 9338                   | .4928 7523               | 5 2710           | .1299          |
| .8702<br>.8703 | 73 3706<br>78 1040         | 3 1974<br>2 0698         | .3360 8326<br>.3359 7308 | 6 9865<br>5 2199         | 5 4020<br>5 5328 | .1298<br>.1297 |
| .8704          | 82 8400                    | .2110 9417               | 8 6283                   | 3 4524                   | 5 6636           | .1296          |
| .8705          | 87 5785                    | .2109 8132               | 7 5251                   | .4921 6842               | 5 7942           | .1295          |
| .8706          | 92 3195                    | 8 6842                   | 6 4213                   | .4919 9150               | 5 9248           | .1294          |
| .8707          | 1.1297 0630                | 7 5548                   | 5 3168                   | 8 1451                   | 6 0552           | .1293          |
| .8708<br>.8709 | 1.1301 8091<br>06 5578     | 6 4248<br>5 2944         | 4 2117<br>3 1059         | 6 3743<br>4 6026         | 6 1856<br>6 3158 | .1292<br>.1291 |
| .8710          | 1.1311 3090                | .2104 1635               | .3351 9994               | .4912 8301               | .9916 4459       | .1290          |
| .8711          | 16 0628                    | 3 0321                   | .3350 8923               | .4911 0568               | 6 5760           | .1289          |
| .8712          | 20 8191                    | 1 9003                   | .3349 7845               | .4909 2826               | 6 7059           | .1288          |
| .8713          | 25 5780                    | .2100 7680               | 8 6760                   | 7 5076                   | 6 8357           | .1287          |
| .8714          | 30 3394                    | .2099 6352               | 7 5669                   | 5 7317                   | 6 9655           | .1286          |
| .8715<br>.8716 | 35 1034<br>39 8700         | 8 5019<br>7 3682         | 6 4571<br>5 3466         | 3 9550<br><b>2 1775</b>  | 7 0951<br>7 2246 | .1285<br>.1284 |
| .8717          | 44 6392                    | 6 2339                   | 4 2355                   | .4900 3991               | 7 3540           | .1283          |
| .8718          | 49 4109                    | 5 0992                   | 3 1237                   | .4898 6198               | 7 4834           | .1282          |
| .8719          | 54 1853                    | 3 9640                   | 2 0112                   | 6 8397                   | 7 6126           | .1281          |
| .8720          | 1.1358 9622                | .2092 8284               | .3340 8981               | .4895 0587               | .9917 7417       | .1280          |
| .8721          | 63 7417                    | 1 6923                   | .3339 7843               | 3 2769                   | 7 8707           | .1279          |
| .8722<br>.8723 | 68 5238<br>73 3086         | .2090 5556<br>.2089 4185 | 8 6698<br>7 5546         | .4891 4943<br>.4889 7107 | 7 9996<br>8 1284 | .1278<br>.1277 |
| .8724          | 78 0959                    | 8 2810                   | 6 4388                   | 7 9263                   | 8 2571           | .1276          |
| .8725          | 82 8858                    | 7 1429                   | 5 3223                   | 6 1411                   | 8 3857           | .1275          |
| .8726          | 87 6784                    | 6 0044                   | 4 2052                   | 4 3550                   | 8 5142           | .1274          |
| .8727          | 92 4735                    | 4 8654                   | 3 0873                   | 2 5681                   | 8 6426           | .1273          |
| .8728<br>.8729 | 1.1397 2713<br>1.1402 0718 | 3 7259<br>2 5859         | 1 9688<br>.3330 8496     | .4880 7803<br>.4878 9916 | 8 7709<br>8 8991 | .1272          |
| .8730          | 1.1406 8748                | .2081 4455               | .3329 7297               | .4877 2021               | .9919 0272       | .1270          |
| .8731          | 11 6805                    | .2080 3046               | 8 6092                   | 5 4117                   | 9 1552           | .1269          |
| .8732          | 16 4888                    | .2079 1632               | 7 4879                   | 3 6204                   | 9 2830           | .1268          |
| .8733          | 21 2997                    | 8 0213                   | 6 3660                   | 1 8283                   | 9 4108           | .1267          |
| .8734          | 26 1133                    | 6 8789                   | 5 2434                   | .4870 0353               | 9 5385           | .1266          |
| .8735          | 30 9295<br>35 7484         | 5 7360<br>4 5927         | 4 1202<br>2 9962         | .4868 2415<br>6 4468     | 9 6661<br>9 7935 | .1265<br>.1264 |
| .8737          | 40 5700                    | 3 4489                   | 1 8716                   | 4 6512                   | .9919 9209       | .1263          |
| .8738          | 45 3942                    | 2 3046                   | .3320 7463               | 2 8547                   | .9920 0482       | .1262          |
| .8739          | 50 2211                    | 1 1598                   | .3319 6203               | .4861 0574               | 0 1754           | . 1261         |
| .8740          | 1.1455 0506                | .2070 0146               | .3318 4936               | .4859 2592               | .9920 3024       | .1260          |
| .8741          | 59 8828                    | .2068 8688               | 7 3663                   | 7 4601                   | 0 4294<br>0 5562 | .1259          |
| .8742          | 64 7177<br>69 5553         | 7 7226<br>6 5759         | 6 2382<br>5 1095         | 5 6602<br>3 8594         | 0 5562           | .1256          |
| .8744          | 74 3956                    | 5 4287                   | 3 9801                   | 2 0577                   | 0 8096           | .1256          |
| .8745          | 79 2385                    | 4 2810                   | 2 8500                   | .4850 2551               | 0 9362           | .1255          |
| .8746          | 84 0842                    | 3 1328                   | 1 7192                   | .4848 4517               | 1 0626           | .1254          |
| .8747          | 88 9325<br>93 7836         | 1 9842<br>.2060 8350     | .3310 5877<br>.3309 4555 | 6 6474<br>4 8422         | 1 1890<br>1 3152 | .1253          |
| .8749          | 1.1498 6373                | .2059 6845               | 8 3227                   | 3 0361                   | 1 4414           | .1251          |
| .8750          | 1.1503 4938                | .2058 5353               | .3307 1891               | .4841 2292               | .9921 5674       | .1250          |
| E-11_          | = 11- 0000 0000            |                          | ,                        |                          |                  |                |

ε<sup>-1</sup>= ε<sup>1</sup>=.0000,0003 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

.8750 .1250

| P     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .8750 | 1.1503 4938 | .2058 5353 | .3307 1891 | .4841 2292     | .9921 5674     | .1250 |
| .8751 | 08 3530     | 7 3847     | 6 0549     | .4839 4213     | 1 6934         | .1249 |
| .8752 | 13 2149     | 6 2336     | 4 9200     | 7 6126         | 1 8192         | .1248 |
| .8753 | 18 0795     | 5 0821     | 3 7843     | 5 8030         | 1 9449         | .1247 |
| .8754 | 22 9469     | 3 9300     | 2 6480     | 3 9926         | 2 0705         | .1246 |
| .8755 | 27 8170     | 2 7775     | 1 5110     | 2 1812         | 2 1961         | .1245 |
| .8756 | 32 6898     | 1 6245     | .3300 3733 | .4830 3689     | 2 3215         | .1244 |
| .8757 | 37 5653     | .2050 4709 | .3299 2349 | .4828 5558     | 2 4468         | .1243 |
| .8758 | 42 4436     | .2049 3169 | 8 0958     | 6 7418         | 2 5720         | .1242 |
| .8759 | 47 3247     | 8 1625     | 6 9560     | 5 9268         | 2 6972         | .1241 |
| .8760 | 1.1552 2085 | .2047 0075 | .3295 8155 | .4823 1110     | .9922 8222     | .1240 |
| .8761 | 57 0951     | 5 8520     | 4 6743     | .4821 2943     | 2 9471         | .1239 |
| .8762 | 61 9844     | 4 6961     | 3 5325     | .4819 4767     | 3 0719         | .1238 |
| .8763 | 66 8764     | 3 5396     | 2 3899     | 7 6582         | 3 1966         | .1237 |
| .8764 | 71 7713     | 2 3827     | 1 2466     | 5 8389         | 3 3212         | .1236 |
| .8765 | 76 6689     | 1 2253     | .3290 1026 | 4 0186         | 3 4457         | .1235 |
| .8766 | 81 5693     | .2040 0673 | .3288 9579 | 2 1974         | 3 5701         | .1234 |
| .8767 | 86 4725     | .2038 9089 | 7 8125     | .4810 3753     | 3 6944         | .1233 |
| .8768 | 91 3785     | 7 7501     | 6 6664     | .4808 5524     | 3 8186         | .1232 |
| .8769 | 1.1596 2872 | 6 5907     | 5 5196     | 6 7285         | 3 9427         | .1231 |
| .8770 | 1.1601 1988 | .2035 4308 | .3284 3721 | .4804 9037     | .9924 0667     | .1230 |
| .8771 | 06 1132     | 4 2704     | 3 2239     | 3 0781         | 4 1906         | .1229 |
| .8772 | 11 0303     | 3 1096     | 2 0750     | .4801 2515     | 4 3144         | .1228 |
| .8773 | 15 9503     | 1 9482     | .3280 9253 | .4799 4240     | 4 4381         | .1227 |
| .8774 | 20 8731     | .2030 7864 | .3279 7750 | 7 5956         | 4 5617         | .1226 |
| .8775 | 25 7987     | .2029 6240 | 8 6239     | 5 7664         | 4 6851         | .1225 |
| .8776 | 30 7271     | 8 4612     | 7 4722     | 3 9362         | 4 8085         | .1224 |
| .8777 | 35 6584     | 7 2979     | 6 3197     | 2 1051         | 4 9318         | .1223 |
| .8778 | 40 5925     | 6 1341     | 5 1666     | .4790 2731     | 5 0550         | .1222 |
| .8779 | 45 5294     | 4 9698     | 4 0127     | .4788 4401     | 5 1780         | .1221 |
| .8780 | 1.1650 4692 | .2023 8050 | .3272 8581 | .4786 6063     | .9925 3010     | .1220 |
| .8781 | 55 4118     | 2 6397     | 1 7028     | 4 7716         | 5 4239         | .1219 |
| .8782 | 60 3573     | 1 4739     | .3270 5467 | 2 9359         | 5 5466         | .1218 |
| .8783 | 65 3056     | .2020 3076 | .3269 3900 | .4781 0994     | 5 6693         | .1217 |
| .8784 | 70 2568     | .2019 1408 | 8 2325     | .4779 2619     | 5 7919         | .1216 |
| .8785 | 75 2108     | 7 9736     | 7 0744     | 7 4235         | 5 9143         | .1215 |
| .8786 | 80 1677     | 6 8058     | 5 9155     | 5 5842         | 6 0367         | .1214 |
| .8787 | 85 1275     | 5 6375     | 4 7559     | 3 7439         | 6 1589         | .1213 |
| .8788 | 90 0901     | 4 4688     | 3 5956     | 1 9028         | 6 2811         | .1212 |
| .8789 | 1.1695 0557 | 3 2995     | 2 4345     | .4770 0607     | 6 4031         | .1211 |
| .8790 | 1.1700 0241 | .2012 1298 | .3261 2728 | .4768 2177     | .9926 5251     | .1210 |
| .8791 | 04 9954     | .2010 9595 | .3260 1103 | 6 3738         | 6 6469         | .1209 |
| .8792 | 09 9696     | .2009 7888 | .3258 9471 | 4 5289         | 6 7687         | .1208 |
| .8793 | 14 9467     | 8 6175     | 7 7831     | 2 6832         | 6 8903         | .1207 |
| .8794 | 19 9267     | 7 4458     | 6 6185     | .4760 8365     | 7 0118         | .1206 |
| .8795 | 24 9096     | 6 2735     | 5 4531     | .4758 9889     | 7 1333         | .1205 |
| .8796 | 29 8954     | 5 1008     | 4 2870     | 7 1403         | 7 2546         | .1204 |
| .8797 | 34 8841     | 3 9276     | 3 1202     | 5 2908         | 7 3758         | .1203 |
| .8798 | 39 8758     | 2 7538     | 1 9526     | 3 4404         | 7 4970         | .1202 |
| .8799 | 44 8704     | 1 5796     | .3250 7844 | .4751 5891     | 7 6180         | .1201 |
| .8800 | 1.1749 8679 | .2000 4048 | .3249 6154 | .4749 7368     | .9927 7389     | .1200 |

E-11= E<sup>11</sup>=.0000,0004 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

.8800 .1200

| P   X   Z   VPQ   VI−p²   VI−q²   Q   | .8800          |                        | ,          |            |                |                | .1200 |
|---|----------------|------------------------|------------|------------|----------------|----------------|-------|
| .8801   | p              | x                      | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
| 8802         59 8718         8 0339         7 2752         6 0295         7 9805         .1198           .8803         64 8781         6 8776         6 1040         4 1744         8 1011         .1197           .8804         69 8874         5 7009         4 9320         2 3184         8 2216         .1196           .8806         79 9149         3 3459         2 5860         .4738 6036         8 4623         .1194           .8807         84 9330         2 1677         1 4119         6 7448         8 5825         .1193           .8809         1.1794 9783         1398 9897         3239 0614         3 0243         8 8226         .1191           .8810         1.1800 0054         .1988 6299         .3237 8851         .4731 1626         .9928 9425         .1190           .8811         05 0355         7 4497         6 7080         .4729 3001         9 0623         .1189           .8813         15 1046         5 0877         4 3517         5 720         9 3016         .1187           .8814         20 1437         3 9059         3 1724         .3 7066         9 4211         .1186           .8815         25 1858         2 7236         1 9924         .4721 8402         .9  | .8800          | 1.1749 8679            | .2000 4048 | .3249 6154 | .4749 7368     | .9927 7389     | .1200 |
| 8805         74 8997         4 5236         3 7594         4,740 4615         8 3420         .1195           8806         79 9149         3 3459         2 5860         .4738 6036         8 4623         .1194           8807         84 9330         2 1677         1 4119         6 7448         8 5825         .1193           8808         89 9542         1990 9889         .3239 0614         3 0243         88 7026         .1192           8810         1.1800 0054         1988 6299         .3237 8851         .4731 1626         .9928 9425         .1190           8811         10 0686         6 2689         5 5302         7 4365         9 1820         .1188           8813         15 1046         5 0877         4 3517         5 7220         9 3016         .1187           8814         20 1437         3 9059         3 1724         3 7066         9 4211         .1186           8815         25 1885         2 7236         1 9924         .4721 8402         9 5405         .1185           8816         30 2308         1 5409         .3231 8117         .4719 9729         9 6598         .1185           8817         35 2789         .1980 3576         .3229 6012         .8 1046 <t< td=""><td>.8802</td><td>59 8718</td><td>8 0539</td><td>7 2752</td><td>6 0295</td><td>7 9805</td><td>.1198</td></t<> | .8802          | 59 8718                | 8 0539     | 7 2752     | 6 0295         | 7 9805         | .1198 |
| 8808         89 9542         1.990 9889         .3240 2370         4 8850         8 7026         .1192           .8810         1.1800 0054         .1988 6029         .3237 8651         .4731 1626         .9928 9425         .1190           .8811         05 0355         7 4497         6 7080         .4729 3001         9 0623         .1180           .8812         10 0686         6 2689         5 5302         7 4365         9 1820         .1188           .8814         20 1437         3 9059         3 1724         3 7066         9 4211         .1186           .8815         25 1858         2 7236         1 9924         .4711 8402         9 5405         .1185           .8816         30 2308         1 5409         .3230 8117         .4719 9729         9 5698         .1185           .8817         35 2789         .1980 3576         .3229 6302         8 1046         9 7790         .1183           .8818         40 3300         .1979 1738         8 4479         6 2354         .9929 8981         .1181           .8820         1.1850 4413         .1976 8047         .3226 0812         .4712 4940         .9930 171         .1181           .8821         .55 5015         5 6194         4 8967  | .8805          | 74 8997                | 4 5236     | 3 7594     | .4740 4615     | 8 3420         | .1195 |
| .8811         05 0355         7 4497         6 7080         .4729 3001         9 0623         .1189           .8812         10 0686         6 2689         5 5302         7 4365         9 1820         .1188           .8813         15 1046         5 0877         4 3517         5 5720         9 3016         .1187           .8814         20 1437         3 9059         3 1724         3 7066         9 4211         .1186           .8815         25 1858         2 7236         1 9924         .4721 8402         9 5405         .1185           .8817         35 2789         1980 3576         .3229 6302         8 1046         9 7790         .1183           .8818         40 3300         .1979 1738         8 4479         6 2354         .9929 8981         .1182           .8821         55 5015         5 6194         4 867         .4710 6219         .92547         .1179           .8822         1.1850 4413         .1976 8047         .3226 0812         .4712 4940         .9930 1360         .1180           .8821         55 5015         5 6194         4 867         .4710 6219         .2547         .1179           .88221         55015         6 1932         32210 514         3 1240  | .8808          | 89 9542                | .1990 9889 | .3240 2370 | 4 8850         | 8 7026         | .1192 |
| .8812         10 0686         6 2689         5 5302         7 4365         9 1820         .1188           .8813         15 1046         5 0877         4 3517         5 5720         9 3016         .1187           .8814         20 1437         3 9059         3 1724         3 7066         9 4211         .1186           .8815         25 1858         2 7236         1 9924         .4721 8402         9 5405         .1185           .8817         35 2789         .1980 3576         .3229 6302         8 1046         9 7790         .1186           .8818         40 3300         .1979 1738         8 4479         6 2354         .9929 8981         .1182           .8821         45 3841         7 9895         7 2649         4 3652         .9930 0171         .1181           .8821         55 5015         5 6194         4 8967         .4710 6219         .9540         .1176           .8821         55 5015         5 6194         4 8967         .4710 6219         .93734         .1178           .8822         75 7726         .1970 8732         .220151         .4708 7489         0 3734         .1178           .8824         70 7003         2 0605         1 3389         4 9999         0 6  | .8810          | 1.1800 0054            | .1988 6299 | .3237 8851 | .4731 1626     | .9928 9425     | .1190 |
| .8815         25         1858         27236         19924         .4721         8402         9 5405         .1185           .8817         30         2308         1 5409         .3230         8117         .4719         9729         9 6598         .1184           .8817         35         2789         .1980         3576         .3229         6302         8 1046         9 7790         .1185           .8818         40         3300         .1979         1738         8 4479         6 2354         .9929         8981         .1182           .8821         45         3841         7 9895         7 2649         4 3652         .9930         0171         .1181           .8821         55         5015         5 6194         4 8967         .4710         6219         0 2547         .1178           .8822         60         5647         4 4336         3 7115         .4708 7489         0 3734         .1178           .8823         65         6310         3 2473         2 5256         6 8749         0 4920         .1177           .8824         70         7003         2 0605         1 3389         4 9999         0 6105         .1176           .8825   | .8812          | 10 0686                | 6 2689     | 5 5302     | 7 4365         | 9 1820         | .1188 |
| .8818         40         3300         .1979         1738         8         4479         6         2354         .9929         8981         .1182           .8820         1.1850         4413         .1976         8047         .3226         0812         .4712         4940         .9930         1360         .1180           .8821         55         5015         5         6194         4         8967         .4708         6219         0         2547         .1179           .8822         60         5647         4         4336         37115         .4708         7489         0         3274         .1178           .8823         65         6310         3         2473         2         5256         6         8749         0         4920         .1176           .8824         70         7003         2         0605         1         3389         4         9999         0         6105         .1176           .8825         75         7726         .1970         8732         .32210         5154         4701         0         24871         .1174           .8827         85         9265         8         4970         7   | .8815          | 25 1858                | 2 7236     | 1 9924     | .4721 8402     | 9 5405         | .1185 |
| .8821       55 5015       5 6194       4 8967       .4710 6219       0 2547       .1179         .8822       60 5647       4 4336       3 7115       .4708 7489       0 3734       .1178         .8823       65 6310       3 2473       2 5256       6 8749       0 4920       .1177         .8824       70 7003       2 0605       1 3389       4 9999       0 6105       .1176         .8826       80 8480       .1969 6853       .3218 9632       .4701 2471       0 8471       .1174         .8827       85 9265       8 4970       7 7742       .4699 3692       0 9653       .1173         .8828       91 0081       7 3082       6 5845       7 4904       1 0833       .1172         .8830       1.1901 1804       .1964 9289       .3214 2029       .4693 7299       .9931 3191       .1170         .8831       06 2712       3 7386       3 0109       .4691 8481       1 4369       .1169         .8833       16 4620       1 3563       .3210 6247       8 0818       1 4369       .1169         .8834       21 5621       .1960 1644       .3209 4305       6 1972       1 7896       .1166         .8835       26 6652       .1958 9720  | .8818          | 40 3300                | .1979 1738 | 8 4479     | 6 2354         | .9929 8981     | .1182 |
| .8822       60 5647       4 4336       3 7115       .4708 7489       0 3734       .1178         .8823       65 6310       3 2473       2 5256       6 8749       0 4920       .1177         .8824       70 7003       2 0605       1 3389       4 9999       0 6105       .1176         .8826       80 8480       .1969 6853       .3218 9632       .4701 2471       0 8471       .1174         .8827       85 9265       8 4970       7 7742       .4699 3692       0 9653       .1173         .8828       91 0081       7 3082       6 5845       7 4904       1 0833       .1172         .8830       1.1901 1804       .1964 9289       .3214 2029       .4693 7299       .9931 3191       .1170         .8831       06 2712       3 7386       3 0109       .4691 8481       1 4369       .1169         .8833       16 4620       1 3563       .3210 6247       8 0818       1 6721       .1167         .8834       21 5621       .1960 1644       .3209 4305       6 1972       1 7896       .1166         .8835       26 6652       .1958 9720       8 2355       4 3116       1 9069       .1165         .8836       31 7715       7 7791       <  | .8820          | 1.1850 4413            | .1976 8047 | .3226 0812 | .4712 4940     | .9930 1360     | .1180 |
| .8825         75 7726         .1970 8732         .3220 1514         3 1240         0 7288         .1175           .8826         80 8480         .1969 6853         .3218 9632         .4701 2471         0 8471         .1174           .8827         85 9265         8 4970         7 7742         .4699 3692         0 9653         .1173           .8828         91 0081         7 3082         6 5845         7 4904         1 0833         .1172           .8829         1.1896 0927         6 1188         5 3941         5 6106         1 2013         .1171           .8830         1.1901 1804         .1964 9289         .3214 2029         .4693 7299         .9931 3191         .1170           .8831         06 2712         3 7386         3 0109         .4691 8481         1 4369         .1169           .8832         11 3651         2 5477         1 8182         .4689 9655         1 5546         .1168           .8833         16 4620         1 3563         .3210 6247         8 0818         1 6721         .1167           .8834         21 5621         .1960 1644         .3209 4305         6 1972         1 7896         .1166           .8835         26 6652         .1958 9720         8 2355   | .8822          | 60 5647                | 4 4336     | 3 7115     | .4708 7489     | 0 3734         | .1178 |
| .8828         91 0081         7 3082         6 5845         7 4904         1 0833         .1172           .8830         1.1901 1804         .1964 9289         .3214 2029         .4693 7299         .9931 3191         .1170           .8831         06 2712         3 7386         3 0109         .4691 8481         1 4369         .1169           .8832         11 3651         2 5477         1 8182         .4689 9655         1 5546         .1168           .8833         16 4620         1 3563         .3210 6247         8 0818         1 6721         .1167           .8834         21 5621        1960 1644         .3209 4305         6 1972         1 7896         .1166           .8835         26 6652         .1958 9720         8 2355         4 3116         1 9069         .1165           .8836         31 7715         7 7791         7 0398         2 4250         2 0242         .1164           .8837         36 8809         6 5856         5 8433         .4680 5375         2 1413         .1163           .8840         1.1952 2278         .1953 0023         .3202 2492         .4674 8690         .9932 4921         .1160           .8841         57 3497         1 8068         .3201 0497   | .8825          | 75 7726                | .1970 8732 | .3220 1514 | 3 1240         | 0 7288         | .1175 |
| .8831       06 2712       3 7386       3 0109       .4691 8481       1 4369       .1169         .8832       11 3651       2 5477       1 8182       .4689 9655       1 5546       .1168         .8833       16 4620       1 3563       .3210 6247       8 0818       1 6721       .1167         .8834       21 5621       .1960 1644       .3209 4305       6 1972       1 7896       .1166         .8835       26 6652       .1958 9720       8 2355       4 3116       1 9069       .1165         .8836       31 7715       7 7791       7 0398       2 4250       2 0242       .1164         .8837       36 8809       6 5856       5 8433       .4680 5375       2 1413       .1163         .8838       41 9934       5 3917       4 6460       .4678 6490       2 2584       .1162         .8839       47 1090       4 1972       3 4480       6 7595       2 3753       .1161         .8840       1.1952 2278       .1953 0023       .3202 2492       .4674 8690       .9932 4921       .1160         .8841       57 3497       1 8068       .3201 0497       2 9775       2 6089       .1159         .8842       62 4747       .1950 6108       <  | .8828          | 91 0081                | 7 3082     | 6 5845     | 7 4904         | 1 0833         | .1172 |
| .8832       11 3651       2 5477       1 8182       .4689 9655       1 5546       .1168         .8833       16 4620       1 3563       .3210 6247       8 0818       1 6721       .1167         .8834       21 5621       .1960 1644       .3209 4305       6 1972       1 7896       .1166         .8835       26 6652       .1958 9720       8 2355       4 3116       1 9069       .1165         .8836       31 7715       7 7791       7 0398       2 4250       2 0242       .1164         .8837       36 8809       6 5856       5 8433       .4680 5375       2 1413       .1163         .8838       41 9934       5 3917       4 6460       .4678 6490       2 2584       .1162         .8839       47 1090       4 1972       3 4480       6 7595       2 3753       .1161         .8840       1.1952 2278       .1953 0023       .3202 2492       .4674 8690       .9932 4921       .1160         .8841       57 3497       1 8068       .3201 0497       2 9775       2 6089       .1159         .8842       62 4747       .1950 6108       .3199 8494       .4671 0851       2 7255       .1158         .8843       67 6029       .1949 4143  | .8830          | 1.1901 1804            | .1964 9289 | .3214 2029 | .4693 7299     | .9931 3191     | .1170 |
| .8835       26 6652       .1958 9720       8 2355       4 3116       1 9069       .1165         .8836       31 7715       7 7791       7 0398       2 4250       2 0242       .1164         .8837       36 8809       6 5856       5 8433       .4680 5375       2 1413       .1163         .8838       41 9934       5 3917       4 6460       .4678 6490       2 2584       .1162         .8839       47 1090       4 1972       3 4480       6 7595       2 3753       .1161         .8840       1.1952 2278       .1953 0023       .3202 2492       .4674 8690       .9932 4921       .1160         .8841       57 3497       1 8068       .3201 0497       2 9775       2 6089       .1159         .8842       62 4747       .1950 6108       .3199 8494       .4671 0851       2 7255       .1158         .8843       67 6029       .1949 4143       8 6483       .4669 1917       2 8420       .1157         .8844       72 7342       8 2173       7 4465       7 2973       2 9585       .1156         .8845       77 8687       7 0197       6 2439       5 4019       3 0748       .1155         .8846       83 0063       5 8217       5  | .8832          | 11 3651                | 2 5477     | 1 8182     | .4689 9655     | 1 5546         | .1168 |
| .8838       41       9934       5       3917       4       6460       .4678       6490       2       2584       .1162         .8839       47       1090       4       1972       3       4480       6       7595       2       3753       .1161         .8840       1.1952       2278       .1953       0023       .3202       2492       .4674       8690       .9932       4921       .1160         .8841       57       3497       1       8068       .3201       0497       2       9775       2       6089       .1159         .8842       62       4747       .1950       6108       .3199       8494       .4671       0851       2       7255       .1158         .8843       67       6029       .1949       4143       8       6483       .4669       1917       2       8420       .1157         .8844       72       7342       8       2173       7       4465       7       2973       2       9585       .1156         .8845       77       8687       7       0197       6       2439       5       4019       3       0748       .1155   | .8835          | 26 6652                | .1958 9720 | 8 2355     | 4 3116         | 1 9069         | .1165 |
| .8841       57 3497       1 8068       .3201 0497       2 9775       2 6089       .1159         .8842       62 4747       .1950 6108       .3199 8494       .4671 0851       2 7255       .1158         .8843       67 6029       .1949 4143       8 6483       .4669 1917       2 8420       .1157         .8844       72 7342       8 2173       7 4465       7 2973       2 9585       .1156         .8845       77 8687       7 0197       6 2439       5 4019       3 0748       .1155         .8846       83 0063       5 8217       5 0405       3 5055       3 1910       .1154         .8847       88 1471       4 6231       3 8364       .4661 6082       3 3072       .1153         .8848       93 2911       3 4241       2 6315       .4659 7099       3 4232       .1152         .8849       1.1998 4383       2 2245       1 4259       7 8105       3 5391       .1151         .8850       1.2003 5886       .1941 0244       .3190 2194       .4655 9102       .9933 6549       .1150   | .8838          | 41 9934                | 5 3917     | 4 6460     | .4678 6490     | 2 2584         | .1162 |
| .8842       62 4747       .1950 6108       .3199 8494       .4671 0851       2 7255       .1158         .8843       67 6029       .1949 4143       8 6483       .4669 1917       2 8420       .1157         .8844       72 7342       8 2173       7 4465       7 2973       2 9585       .1156         .8845       77 8687       7 0197       6 2439       5 4019       3 0748       .1155         .8846       83 0063       5 8217       5 0405       3 5055       3 1910       .1154         .8847       88 1471       4 6231       3 8364       .4661 6082       3 3072       .1153         .8848       93 2911       3 4241       2 6315       .4659 7099       3 4232       .1152         .8849       1.1998 4383       2 2245       1 4259       7 8105       3 5391       .1151         .8850       1.2003 5886       .1941 0244       .3190 2194       .4655 9102       .9933 6549       .1150   | .8840          | 1.1952 2278            | .1953 0023 | .3202 2492 | .4674 8690     | .9932 4921     | .1160 |
| .8845       77 8687       7 0197       6 2439       5 4019       3 0748       .1155         .8846       83 0063       5 8217       5 0405       3 5055       3 1910       .1154         .8847       88 1471       4 6231       3 8364       .4661 6082       3 3072       .1153         .8848       93 2911       3 4241       2 6315       .4659 7099       3 4232       .1152         .8849       1.1998       4383       2 2245       1 4259       7 8105       3 5391       .1151         .8850       1.2003       5886       .1941       0244       .3190       2194       .4655       9102       .9933       6549       .1150   | .8842          | 62 4747                | .1950 6108 | .3199 8494 | .4671 0851     | 2 7255         | .1158 |
| .8848       93       2911       3       4241       2       6315       .4659       7099       3       4232       .1152         .8849       1.1998       4383       2       2245       1       4259       7       8105       3       5391       .1151         .8850       1.2003       5886       .1941       0244       .3190       2194       .4655       9102       .9933       6549       .1150   | .8845          | 77 8687                | 7 0197     | 6 2439     | 5 4019         | 3 0748         | .1155 |
|   | .8848<br>.8849 | 93 2911<br>1.1998 4383 | 3 4241     | 2 6315     | .4659 7099     | 3 4232         | .1152 |
|   |                | <u> </u>               | .1941 0244 | .3190 2194 | .4655 9102     | .9933 6549     | .1150 |

E<sup>-11</sup>= E<sup>11</sup>=.0000,0004 · .0000,0001 .0000,0001 .0000,0001 .0000,0000+

.8850 .1150

| p                                      | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|--|-------------|------------|------------|----------------|----------------|-------|
| .8850                                  | 1.2003 5886 | .1941 0244 | .3190 2194 | .4655 9102     | .9933 6549     | .1150 |
| .8851                                  | 08 7421     | .1939 8238 | .3189 0122 | 4 0089         | 3 7706         | .1149 |
| .8852                                  | 13 8988     | 8 6226     | 7 8043     | 2 1066         | 3 8862         | .1148 |
| .8853                                  | 19 0587     | 7 4210     | 6 5955     | .4650 2033     | 4 0018         | .1147 |
| .8854                                  | 24 2218     | 6 2188     | 5 3860     | .4648 2990     | 4 1172         | .1146 |
| .8855                                  | 29 3881     | 5 0161     | 4 1757     | 6 3938         | 4 2325         | .1145 |
| .8856                                  | 34 5577     | 3 8129     | 2 9647     | 4 4875         | 4 3477         | .1144 |
| .8857                                  | 39 7304     | 2 6092     | 1 7528     | 2 5802         | 4 4628         | .1143 |
| .8858                                  | 44 9064     | 1 4050     | .3180 5402 | .4640 6719     | 4 5778         | .1142 |
| .8859                                  | 50 0856     | .1930 2002 | .3179 3268 | .4638 7627     | 4 6927         | .1141 |
| .8860                                  | 1.2055 2680 | .1928 9950 | .3178 1126 | .4636 8524     | .9934 8075     | .1140 |
| .8861                                  | 60 4537     | 7 7892     | 6 8977     | 4 9411         | 4 9222         | .1139 |
| .8862                                  | 65 6426     | 6 5829     | 5 6820     | 3 0288         | 5 0368         | .1138 |
| .8863                                  | 70 8347     | 5 3761     | 4 4655     | .4631 1155     | 5 1513         | .1137 |
| .8864                                  | 76 0301     | 4 1687     | 3 2482     | .4629 2012     | 5 2657         | .1136 |
| .8865                                  | 81 2288     | 2 9609     | 2 0301     | 7 2859         | 5 3800         | .1135 |
| .8866                                  | 86 4307     | 1 7525     | .3170 8113 | 5 3696         | 5 4941         | .1134 |
| .8867                                  | 91 6360     | .1920 5436 | .3169 5916 | 3 4523         | 5 6082         | .1133 |
| .8868                                  | 1.2096 8445 | .1919 3341 | 8 3712     | .4621 5339     | 5 7222         | .1132 |
| .8869                                  | 1.2102 0562 | 8 1242     | 7 1500     | .4619 6146     | 5 8361         | .1131 |
| .8870                                  | 1.2107 2713 | .1916 9137 | .3165 9280 | .4617 6942     | .9935 9499     | .1130 |
| .8871                                  | 12 4897     | 5 7028     | 4 7052     | 5 7728         | 6 0636         | .1129 |
| .8872                                  | 17 7113     | 4 4912     | 3 4816     | 3 8505         | 6 1771         | .1128 |
| .8873                                  | 22 9363     | 3 2792     | 2 2573     | 1 9270         | 6 2906         | .1127 |
| .8874                                  | 28 1646     | 2 0667     | .3161 0321 | .4610 0026     | 6 4040         | .1126 |
| .8875                                  | 33 3962     | .1910 8536 | .3159 8062 | .4608 0771     | 6 5172         | .1125 |
| .8876                                  | 38 6311     | .1909 6400 | 8 5794     | 6 1507         | 6 6304         | .1124 |
| .8877                                  | 43 8694     | 8 4258     | 7 3519     | 4 2232         | 6 7435         | .1123 |
| .8878                                  | 49 1110     | 7 2112     | 6 1236     | 2 2946         | 6 8564         | .1122 |
| .8879                                  | 54 3559     | 5 9960     | 4 8945     | .4600 3651     | 6 9693         | .1121 |
| .8880                                  | 1.2159 6042 | .1904 7803 | .3153 6645 | .4598 4345     | .9937 0821     | .1120 |
| .8881                                  | 64 8558     | 3 5641     | 2 4338     | 6 5029         | 7 1947         | .1119 |
| .8882                                  | 70 1108     | 2 3474     | .3151 2023 | 4 5703         | 7 3073         | .1118 |
| .8883                                  | 75 3691     | .1901 1301 | .3149 9700 | 2 6366         | 7 4197         | .1117 |
| .8884                                  | 80 6309     | .1899 9123 | 8 7369     | .4590 7019     | 7 5321         | .1116 |
| .8885                                  | 85 8960     | 8 6940     | 7 5030     | .4588 7662     | 7 6443         | .1115 |
| .8886                                  | 91 1644     | 7 4751     | 6 2683     | 6 8294         | 7 7565         | .1114 |
| .8887                                  | 1.2196 4363 | 6 2557     | 5 0328     | 4 8916         | 7 8685         | .1113 |
| .8888                                  | 1.2201 7115 | 5 0358     | 3 7964     | 2 9528         | 7 9805         | .1112 |
| .8889                                  | 06 9902     | 3 8154     | 2 5593     | .4581 0129     | 8 0923         | .1111 |
| .8890                                  | 1.2212 2722 | .1892 5944 | .3141 3214 | .4579 0720     | .9938 2041     | .1110 |
| .8891                                  | 17 5577     | 1 3729     | .3140 0826 | 7 1300         | 8 3157         | .1109 |
| .8892                                  | 22 8465     | .1890 1509 | .3138 8431 | 5 1870         | 8 4272         | .1108 |
| .8893                                  | 28 1388     | .1888 9284 | 7 6027     | 3 2429         | 8 5387         | .1107 |
| .8894                                  | 33 4345     | 7 7053     | 6 3616     | .4571 2978     | 8 6500         | .1106 |
| .8995                                  | 38 7337     | 6 4817     | 5 1196     | .4569 3517     | 8 7612         | .1105 |
| .8896                                  | 44 0363     | 5 2575     | 3 8768     | 7 4045         | 8 8724         | .1104 |
| .8897                                  | 49 3423     | 4 0329     | 2 6332     | 5 4563         | 8 9834         | .1103 |
| .8898                                  | 54 6518     | 2 8077     | 1 3888     | 3 5070         | 9 0943         | .1102 |
| .8899                                  | 59 9648     | 1 5819     | .3130 1436 | .4561 5566     | 9 2051         | .1101 |
| .8900<br><sub>F</sub> -11 <sub>=</sub> | 1.2265 2812 | .1880 3557 | .3128 8976 | .4559 6052     | .9939 3159     | .1100 |

E-11= E1=.0000,0004 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

.8900 .1100

| P     | x           | z           | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|-------------|------------|----------------|----------------|-------|
| .8900 | 1.2265 2812 | .1880 3557  | .3128 8976 | .4559 6052     | .9939 3159     | .1100 |
| .8901 | 70 6011     | . 1879 1289 | 7 6507     | 7 6528         | 9 4265         | .1099 |
| .8902 | 75 9244     | 7 9015      | 6 4030     | 5 6993         | 9 5370         | .1098 |
| .8903 | 81 2513     | 6 6737      | 5 1546     | 3 7447         | 9 6474         | .1097 |
| .8904 | 86 5816     | 5 4453      | 3 9052     | .4551 7891     | 9 7577         | .1096 |
| .8905 | 91 9154     | 4 2164      | 2 6551     | .4549 8324     | 9 8680         | .1095 |
| .8906 | 1.2297 2527 | 2 9869      | 1 4042     | 7 8747         | .9939 9781     | .1094 |
| .8907 | 1.2302 5935 | 1 7569      | .3120 1524 | 5 9159         | .9940 0881     | .1093 |
| .8908 | 07 9379     | .1870 5264  | .3118 8998 | 3 9560         | 0 1980         | .1092 |
| .8909 | 13 2857     | .1869 2953  | 7 6464     | 1 9950         | 0 3078         | .1091 |
| .8910 | 1.2318 6371 | .1868 0637  | .3116 3921 | .4540 0330     | .9940 4175     | .1090 |
| .8911 | 23 9920     | 6 8316      | 5 1371     | .4538 0700     | 0 5271         | .1089 |
| .8912 | 29 3504     | 5 5989      | 3 8812     | 6 1058         | 0 6366         | .1088 |
| .8913 | 34 7124     | 4 3657      | 2 6245     | 4 1406         | 0 7460         | .1087 |
| .8914 | 40 0779     | 3 1320      | 1 3669     | 2 1743         | 0 8553         | .1086 |
| .8915 | 45 4470     | 1 8977      | .3110 1085 | .4530 2069     | 0 9645         | .1085 |
| .8916 | 50 8197     | .1860 6629  | .3108 8493 | .4528 2385     | 1 0736         | .1084 |
| .8917 | 56 1959     | . 1859 4276 | 7 5893     | 6 2690         | 1 1826         | .1083 |
| .8918 | 61 5757     | 8 1917      | 6 3284     | 4 2984         | 1 2915         | .1082 |
| .8919 | 66 9590     | 6 9552      | 5 0667     | 2 3267         | 1 4003         | .1081 |
| .8920 | 1.2372 3460 | . 1855 7183 | .3103 8041 | .4520 3540     | .9941 5089     | .1080 |
| .8921 | 77 7365     | 4 4808      | 2 5407     | .4518 3801     | 1 6175         | .1079 |
| .8922 | 83 1307     | 3 2427      | 1 2765     | 6 4052         | 1 7260         | .1078 |
| .8923 | 88 5284     | 2 0041      | .3100 0115 | 4 4292         | 1 8344         | .1077 |
| .8924 | 93 9298     | . 1850 7650 | .3098 7456 | 2 4521         | 1 9427         | .1076 |
| .8925 | 1.2399 3348 | . 1849 5254 | 7 4788     | .4510 4739     | 2 0508         | .1075 |
| .8926 | 1.2404 7434 | 8 2852      | 6 2112     | .4508 4946     | 2 1589         | .1074 |
| .8927 | 10 1556     | 7 0444      | 4 9428     | 6 5143         | 2 2669         | .1073 |
| .8928 | 15 5715     | 5 8031      | 3 6735     | 4 5328         | 2 3748         | .1072 |
| .8929 | 20 9910     | 4 5613      | 2 4034     | 2 5503         | 2 4825         | .1071 |
| .8930 | 1.2426 4142 | .1843 3189  | .3091 1325 | .4500 5666     | .9942 5902     | .1070 |
| .8931 | 31 8410     | 2 0760      | .3089 8607 | .4498 5819     | 2 6978         | .1069 |
| .8932 | 37 2715     | .1840 8326  | 8 5880     | 6 5960         | 2 8052         | .1068 |
| .8933 | 42 7057     | .1839 5886  | 7 3145     | 4 6091         | 2 9126         | .1067 |
| .8934 | 48 1435     | 8 3440      | 6 0402     | 2 6211         | 3 0199         | .1066 |
| .8935 | 53 5850     | 7 0989      | 4 7650     | .4490 6319     | 3 1270         | .1065 |
| .8936 | 59 0302     | 5 8533      | 3 4889     | .4488 6417     | 3 2341         | .1064 |
| .8937 | 64 4791     | 4 6071      | 2 2120     | 6 6503         | 3 3410         | .1063 |
| .8938 | 69 9317     | 3 3604      | .3080 9343 | 4 6578         | 3 4479         | .1062 |
| .8939 | 75 3881     | 2 1131      | .3079 6557 | 2 6643         | 3 5546         | .1061 |
| .8940 | 1.2480 8481 | .1830 8653  | .3078 3762 | .4480 6696     | .9943 6613     | .1060 |
| .8941 | 86 3119     | . 1829 6170 | 7 0959     | .4478 6738     | 3 7678         | .1059 |
| .8942 | 91 7794     | 8 3681      | 5 8147     | 6 6769         | 3 8743         | .1058 |
| .8943 | 1.2497 2506 | 7 1186      | 4 5326     | 4 6789         | 3 9806         | .1057 |
| .8944 | 1.2502 7256 | 5 8686      | 3 2497     | 2 6797         | 4 0869         | .1056 |
| .8945 | 08 2043     | 4 6181      | 1 9660     | .4470 6795     | 4 1930         | .1055 |
| .8946 | 13 6868     | 3 3670      | .3070 6814 | .4468 6781     | 4 2991         | .1054 |
| .8947 | 19 1730     | 2 1153      | .3069 3959 | 6 6756         | 4 4050         | .1053 |
| .8948 | 24 6630     | .1820 8631  | 8 1095     | 4 6720         | 4 5108         | .1052 |
| .8949 | 30 1568     | .1819 6104  | 6 8223     | 2 6673         | 4 6166         | .1051 |
| .8950 | 1.2535 6544 | .1818 3571  | .3065 5342 | .4460 6614     | .9944 7222     | .1050 |

 $E^{-1}=E^{1}=0000,0005$  .0000,0001 .0000,0001 .0000,0000+ .0000,0000

.8950 .1050

| p     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$     | q     |
|-------|-------------|------------|------------|----------------|--------------------|-------|
| .8950 | 1.2535 6544 | .1818 3571 | .3065 5342 | .4460 6614     | .9944 7222         | .1050 |
| .8951 | 41 1558     | 7 1033     | 4 2453     | .4458 6544     | 4 8278             | .1049 |
| .8952 | 46 6609     | 5 8489     | 2 9554     | 6 6463         | 4 9332             | .1048 |
| .8953 | 52 1699     | 4 5939     | 1 6647     | 4 6370         | 5 0385             | .1047 |
| .8954 | 57 6827     | 3 3384     | .3060 3732 | 2 6266         | 5 1437             | .1046 |
| .8955 | 63 1993     | 2 0824     | .3059 0807 | .4450 6151     | 5 2489             | .1045 |
| .8956 | 68 7197     | .1810 8258 | 7 7874     | .4448 6025     | 5 3539             | .1044 |
| .8957 | 74 2440     | .1809 5687 | 6 4933     | 6 5887         | 5 4588             | .1043 |
| .8958 | 79 7721     | 8 3110     | 5 1982     | 4 5738         | 5 5636             | .1042 |
| .8959 | 85 3040     | 7 0527     | 3 9023     | 2 5577         | 5 6684             | .1041 |
| .8960 | 1.2590 8398 | .1805 7939 | .3052 6054 | .4440 5405     | .9945 <b>77</b> 30 | .1040 |
| .8961 | 1.2596 3795 | 4 5345     | 1 3078     | .4438 5222     | 5 8775             | .1039 |
| .8962 | 1.2601 9230 | 3 2746     | .3050 0092 | 6 5027         | 5 9819             | .1038 |
| .8963 | 07 4704     | 2 0141     | .3048 7097 | 4 4820         | 6 0862             | .1037 |
| .8964 | 13 0217     | .1800 7531 | 7 4094     | 2 4603         | 6 1904             | .1036 |
| .8965 | 18 5769     | .1799 4915 | 6 1082     | .4430 4373     | 6 2945             | .1035 |
| .8966 | 24 1360     | 8 2294     | 4 8061     | .4428 4133     | 6 3985             | .1034 |
| .8967 | 29 6990     | 6 9667     | 3 5031     | 6 3880         | 6 5025             | .1033 |
| .8968 | 35 2658     | 5 7035     | 2 1992     | 4 3616         | 6 6063             | .1032 |
| .8969 | 40 8366     | 4 4397     | .3040 8944 | 2 3341         | 6 7100             | .1031 |
| .8970 | 1.2646 4114 | .1793 1753 | .3039 5888 | .4420 3054     | .9946 8136         | .1030 |
| .8971 | 51 9901     | 1 9104     | 8 2822     | .4418 2756     | 6 9171             | .1029 |
| .8972 | 57 5727     | .1790 6449 | 6 9748     | 6 2446         | 7 0205             | .1028 |
| .8973 | 63 1592     | .1789 3789 | 5 6665     | 4 2124         | 7 1238             | .1027 |
| .8974 | 68 7497     | 8 1123     | 4 3573     | 2 1791         | 7 2270             | .1026 |
| .8975 | 74 3442     | 6 8451     | 3 0471     | .4410 1446     | 7 3300             | .1025 |
| .8976 | 79 9426     | 5 5774     | 1 7361     | .4408 0089     | 7 4330             | .1024 |
| .8977 | 85 5450     | 4 3091     | .3030 4242 | 6 0721         | 7 5359             | .1023 |
| .8978 | 91 1514     | 3 0403     | .3029 1114 | 4 0341         | 7 6387             | .1022 |
| .8979 | 1.2696 7618 | 1 7709     | 7 7977     | .4401 9949     | 7 7414             | .1021 |
| .8980 | 1.2702 3762 | .1780 5009 | .3026 4831 | .4399 9545     | .9947 8440         | .1020 |
| .8981 | 07 9946     | .1779 2304 | 5 1676     | 7 9130         | 7 9465             | .1019 |
| .8982 | 13 6170     | 7 9593     | 3 8512     | 5 8703         | 8 0489             | .1018 |
| .8983 | 19 2435     | 6 6877     | 2 5339     | 3 8265         | 8 1511             | .1017 |
| .8984 | 24 8739     | 5 4155     | .3021 2156 | .4391 7814     | 8 2533             | .1016 |
| .8985 | 30 5084     | 4 1427     | .3019 8965 | .4389 7352     | 8 3554             | .1015 |
| .8986 | 36 1470     | 2 8694     | 8 5765     | 7 6878         | 8 4574             | .1014 |
| .8987 | 41 7896     | 1 5955     | 7 2555     | 5 6392         | 8 5592             | .1013 |
| .8988 | 47 4363     | .1770 3210 | 5 9337     | 3 5894         | 8 6610             | .1012 |
| .8989 | 53 0870     | .1769 0460 | 4 6109     | .4381 5384     | 8 7627             | .1011 |
| .8990 | 1.2758 7418 | .1767 7704 | .3013 2872 | .4379 4863     | .9948 8643         | .1010 |
| .8991 | 64 4007     | 6 4943     | 1 9626     | 7 4329         | 8 9657             | .1009 |
| .8992 | 70 0637     | 5 2175     | .3010 6371 | 5 3784         | 9 0671             | .1008 |
| .8993 | 75 7307     | 3 9402     | .3009 3107 | 3 3226         | 9 1684             | .1007 |
| .8994 | 81 4019     | 2 6624     | 7 9834     | .4371 2657     | 9 2695             | .1006 |
| .8995 | 87 0772     | 1 3840     | 6 6551     | .4369 2076     | 9 3706             | .1005 |
| .8996 | 92 7567     | .1760 1050 | 5 3259     | 7 1483         | 9 4715             | .1004 |
| .8997 | 1.2798 4402 | .1758 8254 | 3 9958     | 5 0877         | 9 5724             | .1003 |
| .8998 | 1.2804 1279 | 7 5453     | 2 6648     | 3 0260         | 9 6732             | .1002 |
| .8999 | 09 8197     | 6 2646     | 1 3329     | .4360 9631     | 9 7738             | .1001 |
| .9000 | 1.2815 5157 | .1754 9833 | .3000 0000 | .4358 8989     | .9949 8744         | .1000 |

E-IL EIL=.0000,0005 .0000,0001 .0000,0001 .0000,0001 .0000,0000+

TABLE I

.9000 .1000

| P              | x                      | z                        | √pq                | $\sqrt{1-p^2}$        | $\sqrt{1-q^2}$           | q              |
|----------------|------------------------|--------------------------|--------------------|-----------------------|--------------------------|----------------|
| .9000          | 1.2815 5157            | .1754 9833               | .3000 0000         | .4358 8989            | .9949 8744               | .1000          |
| .9001          | 21 2158                | 3 7015                   | .2998 6662         | 56 8336               | .9949 9748               | .0999          |
| .9002<br>.9003 | 26 9201<br>32 6286     | 2 4191<br>.1751 1361     | 97 3315<br>95 9958 | 54 7670<br>52 6993    | .9950 0752<br>1754       | .0998<br>.0997 |
|                |                        |                          |                    |                       |                          |                |
| .9004<br>.9005 | 38 3413<br>44 0581     | .1749 8525<br>8 5684     | 94 6592<br>93 3217 | 50 6303<br>48 5601    | 2756<br>3756             | .0996<br>.0995 |
| .9006          | 49 7792                | 7 2837                   | 91 9833            | 46 4887               | 4756                     | .0994          |
| .9007          | 55 5045                | 5 9985                   | 90 6439            | 44 4161               | 5754                     | .0993          |
| .9008          | 61 2340<br>66 9677     | 4 7126<br>3 4262         | 89 3036<br>87 9623 | 42 3422<br>40 2672    | 6752<br>7748             | .0992<br>.0991 |
| .9010          | 1.2872 7056            | .1742 1392               | .2986 6202         | .4338 1909            | .9950 8743               | .0990          |
| .9011          | 78 4478                | .1740 8517               | 85 2770            | 36 1134               | .9950 9738               | .0989          |
| .9012          | 84 1942                | .1739 5636               | 83 9330            | 34 0346               | .9951 0731               | .0988          |
| .9013          | 89 9449                | 8 2748                   | 82 5880            | 31 9546               | 1723                     | .0987          |
| .9014          | 1.2895 6999            | 6 9856                   | 81 2420            | 29 8734               | 2715                     | .0986          |
| .9015<br>.9016 | 1.2901 4592<br>07 2227 | 5 6957<br>4 4053         | 79 8951<br>78 5473 | 27 7910<br>25 7073    | 3705<br>4694             | .0985<br>.0984 |
| .9017          | 12 9905                | 3 1143                   | 77 1985            | 23 6224               | 5683                     | .0983          |
| .9018          | 18 7626                | 1 8227                   | 75 8488            | 21 5363               | 6670                     | .0982          |
| .9019          | 24 5391                | .1730 5305               | 74 4981            | 19 4489               | 7656                     | .0981          |
| .9020          | 1.2930 3198            | .1729 2378               | .2973 1465         | .4317 3603            | .9951 8641               | .0980          |
| .9021<br>.9022 | 36 1048<br>41 8942     | 7 9444<br>6 6505         | 71 7939<br>70 4404 | 15 2704<br>13 1793    | .9951 9626<br>.9952 0609 | .0979<br>.0978 |
| .9023          | 47 6880                | 5 3561                   | 69 0859            | 11.0870               | 1591                     | .0977          |
| .9024          | 53 4860                | 4 0610                   | 67 7304            | 08 9934               | 2572                     | .0976          |
| .9025          | 59 2885                | 2 7654                   | 66 3740            | 06 8985               | 3552<br>4533             | .0975          |
| .9026          | 65 0953                | 1 4691                   | 65 0167            | 04 8024               | 4532                     | .0974          |
| .9027<br>.9028 | 70 9064<br>76 7220     | .1720 1723<br>.1718 8750 | 63 6584<br>62 2991 | 02 7051<br>.4300 6065 | 5510<br>6487             | .0973          |
| .9029          | 82 5419                | 7 5770                   | 60 9389            | .4298 5066            | 7463                     | .0971          |
| .9030          | 1.2988 3663            | .1716 2785               | .2959 5777         | .4296 4055            | .9952 8438               | .0970          |
| .9031          | 1.2994 1951            | 4 9793                   | 58 2155            | 94 3031               | .9952 9412               | .0969          |
| .9032          | 1.3000 0283<br>05 8659 | 3 6796<br>2 3793         | 56 8524<br>55 4883 | 92 1994<br>90 0945    | .9953 0385<br>1357       | .0968<br>.0967 |
| .9034          | 11 7079                | .1711 0784               | 54 1232            | 87 9883               | 2328                     | .0966          |
| .9035          | 17 5544                | .1709 7770               | 52 7572            | 85 8809               | 3298                     | .0965          |
| .9036          | 23 4054                | 8 4749                   | 51 3902            | 83 7722               | 4267                     | .0964          |
| .9037          | 29 2608                | 7 1723                   | 50 0222            | 81 6622               | 5235                     | .0963          |
| .9038          | 35 1207<br>40 9850     | 5 8691<br>4 5653         | 48 6533<br>47 2833 | 79 5509<br>77 4384    | 6202<br>7168             | .0962<br>.0961 |
| .9040          | 1.3046 8539            | .1703 2609               | .2945 9124         | .4275 3245            | .9953 8133               | .0960          |
| .9041          | 52 7272                | 1 9559                   | 44 5405            | 73 2094               | .9953 9097               | .0959          |
| .9042          | 58 6051                | .1700 6503               | 43 1677            | 71 0931               | .9954 0060               | .0958          |
| .9043          | 64 4874                | .1699 3442               | 41 7938            | 68 9754               | 1022                     | .0957          |
| .9044          | 70 3743<br>76 2657     | 8 0374<br>6 7301         | 40 4190<br>39 0432 | 66 8565<br>64 7362    | 1983<br>2943             | .0956<br>.0955 |
| .9046          | 82 1617                | 5 4222                   | 37 6664            | 62 6147               | 3902                     | .0954          |
| .9047          | 88 0622                | 4 1137                   | 36 2886            | 60 4919               | 4860                     | .0953          |
| .9048          | 93 9672<br>1.3099 8769 | 2 8046<br>1 4949         | 34 9099<br>33 5301 | 58 3678<br>56 2424    | 5817<br>6772             | .0952<br>.0951 |
| .9050          |                        | [                        | [                  |                       | [                        |                |
| IL             | 1.3105 7911            | .1690 1846               | .2932 1494         | .4254 1157            | .9954 7727               | .0950          |

 $E^{-1}$   $E^{1}$  .0000,0005 .0000,0001 .0000,0001 .0000,0002 .0000,0000+ .000000009

.9050 .0950

| r              |                        |                          |                    | <i></i>            | · · · · · · · · · · · · · · · · · · · | .0950          |
|----------------|------------------------|--------------------------|--------------------|--------------------|---------------------------------------|----------------|
| P              | x                      | Z                        | √pq                | $\sqrt{1-p^2}$     | $\sqrt{1-q^2}$                        | q              |
| .9050          | 1.3105 7911            | .1690 1846               | .2932 1494         | .4254 1157         | .9954 7727                            | .0950          |
| .9051          | 11 7099                | .1688 8737               | 30 7676            | 51 9877            | 8681                                  | .0949          |
| .9052          | 17 6333                | 7 5623                   | 29 3849            | 49 8584            | .9954 9634                            | .0948          |
| .9053          | 23 5613                | 6 2502                   | 28 0012            | 47 7277            | .9955 0586                            | .0947          |
| .9054<br>.9055 | 29 4940<br>35 4312     | 4 9375<br>3 6243         | 26 6165<br>25 2308 | 45 5958<br>43 4626 | 1536<br>2486                          | .0946<br>.0945 |
| .9056          | 41 3731                | 2 3105                   | 23 8440            | 41 3281            | 3435                                  | .0944          |
| .9057          | 47 3196                | .1680 9960               | 22 4563            | 39 1923            | 4383                                  | .0943          |
| .9058          | 53 2708                | .1679 6810               | 21 0676            | 37 0551            | 5329                                  | .0942          |
| .9059          | 59 2267                | 8 3654                   | 19 6779            | 34 9166            | 6275                                  | .0941          |
| .9060          | 1.3165 1872            | . 1677 0492              | .2918 2872         | .4232 7769         | .9955 7220                            | .0940          |
| .9061          | 71 1524                | 5 7323                   | 16 8954            | 30 6358            | 8163                                  | .0939          |
| .9062<br>.9063 | 77 1223<br>83 0969     | 4 4149<br>3 0969         | 15 5027<br>14 1090 | 28 4933<br>26 3496 | .9955 9106<br>.9956 0048              | .0938          |
| }              |                        |                          |                    |                    |                                       |                |
| .9064<br>.9065 | 89 0762<br>1.3195 0602 | 1 7783<br>.1670 4591     | 12 7142<br>11 3184 | 24 2045<br>22 0581 | 0988<br>1928                          | .0936          |
| .9066          | 1.3201 0489            | .1669 1393               | 09 9216            | 19 9104            | 2867                                  | .0934          |
| .9067          | 07 0424                | 7 8189                   | 08 5239            | 17 7614            | 3804                                  | .0933          |
| .9068          | 13 0406                | 6 4979                   | 07 1250            | 15 6110            | 4741                                  | .0932          |
| .9069          | 19 0436                | 5 1763                   | 05 7252            | 13 4593            | 5676                                  | .0931          |
| .9070          | 1.3225 0514            | .1663 8541               | .2904 3244         | .4211 3062         | .9956 6611                            | .0930          |
| .9071<br>.9072 | 31 0639<br>37 0812     | 2 5313<br>.1661 2079     | 02 9225<br>01 5196 | 09 1518<br>06 9961 | 7544<br>8477                          | .0929          |
| .9073          | 43 1034                | .1659 8838               | .2900 1157         | 04 8390            | .9956 9408                            | .0927          |
| .9074          | 49 1303                | 8 5592                   | .2898 7107         | 02 6806            | .9957 0339                            | .0926          |
| .9075          | 55 1620                | 7 2340                   | 97 3048            | .4200 5208         | 1268                                  | .0925          |
| .9076          | 61 1986                | 5 9082                   | 95 8978            | .4198 3597         | 2197                                  | .0924          |
| .9077          | 67 2400                | 4 5818                   | 94 4898            | 96 1972            | 3124                                  | .0923          |
| .9078<br>.9079 | 73 2862<br>79 3373     | 3 2548<br>1 9271         | 93 0807<br>91 6706 | 94 0334<br>91 8682 | 4051<br>4976                          | .0922<br>.0921 |
| .9080          | 1.3285 3933            | .1650 5989               | .2890 2595         | .4189 7017         | .9957 5901                            | .0920          |
| .9081          | 91 4541                | .1649 2700               |                    | 87 5338            | 6824                                  | .0919          |
| .9082          | 1.3297 5199            | 7 9406                   | 88 8473<br>87 4342 | 85 3645            | 7747                                  | .0918          |
| .9083          | 1.3303 5905            | 6 6105                   | 86 0199            | 83 1939            | 8668                                  | .0917          |
| .9084          | 09 6661                | 5 2799                   | 84 6047            | 81 0219            | .9957 9588                            | .0916          |
| .9085          | 15 7465                | 3 9486<br>2 6167         | 83 1883            | 78 8485<br>76 6738 | .9958 0508<br>1426                    | .0915          |
| .9086          | 21 8319                |                          | 81 7710            | 76 6738            |                                       |                |
| .9087<br>.9088 | 27 9222<br>34 0175     | .1641 2842<br>.1639 9511 | 80 3526<br>78 9331 | 74 4977<br>72 3202 | 2343<br>3260                          | .0913          |
| .9089          | 40 1177                | 8 6174                   | 77 5126            | 70 1414            | 4175                                  | .0911          |
| .9090          | 1.3346 2229            | .1637 2831               | .2876 0911         | .4167 9611         | .9958 5089                            | .0910          |
| .9091          | 52 3331                | 5 9482                   | 74 6685            | 65 7795            | 6003                                  | .0909          |
| .9092          | 58 4482                | 4 6127                   | 73 2449            | 63 5965            | 6915                                  | .0908          |
| .9093          | 64 5684                | 3 2765                   | 71 8202            | 61 4121            | 7826                                  | .0907          |
| .9094          | 70 6935<br>76 8237     | 1 9397<br>.1630 6024     | 70 3944<br>68 9676 | 59 2264<br>57 0392 | 8736<br>.9958 9646                    | .0906          |
| .9096          | 82 9589                | .1629 2644               | 67 5397            | 54 8507            | .9959 0554                            | .0904          |
| .9097          | 89 0992                | 7 9258                   | 66 1108            | 52 6607            | 1461                                  | .0903          |
| .9098          | 1.3395 2445            | 6 5866                   | 64 6808            | 50 4694            | 2367                                  | .0902          |
| .9099          | 1.3401 3949            | 5 2467                   | 63 2497            | 48 2766            | 3272                                  | .0901          |
| .9100          | 1.3407 5503            | .1623 9063               | .2861 8176         | .4146 0825         | .9959 4177                            | .0900          |

 $E^{-1} = E^{1} = .0000,0006$  .0000,0001 .0000,0001 .0000,0002 .0000,0000+

 $E^{-111} = E^{111} = 0.00 \text{ and a cot}$ 

TABLE I

.9100 .0900

| .9100              |                             |                          |                    |                    |                    | .0900          |
|--------------------|-----------------------------|--------------------------|--------------------|--------------------|--------------------|----------------|
| p                  | x                           | z                        | √pq                | $\sqrt{1-p^2}$     | $\sqrt{1-q^2}$     | q              |
| .9100              | 1.3407 5503                 | .1623 9063               | .2861 8176         | .4146 0825         | .9959 4177         | .0900          |
| .9101              | 13 7108                     | 2 5652                   | 60 3844            | 43 8869            | 5080               | .0899          |
| .9102<br>.9103     | 19 8765<br>26 0472          | .1621 2235<br>.1619 8812 | 58 9502<br>57 5148 | 41 6900<br>39 4916 | 5982<br>6883       | .0898<br>.0897 |
| 1                  |                             |                          |                    |                    |                    | i              |
| .9104<br>.9105     | 32 2231<br>38 4041          | 8 5383<br>7 1948         | 56 0784<br>54 6410 | 37 2919<br>35 0907 | 7783<br>8682       | .0896<br>.0895 |
| .9106              | 44 5902                     | 5 8506                   | 53 2024            | 32 8881            | .9959 9580         | .0894          |
| .9107              | 50 7815                     | 4 5059                   | 51 7628            | 30 6841            | .9960 0477         | .0893          |
| .9108              | 56 9779                     | 3 1605                   | 50 3221            | 28 4787            | 1373               | .0892          |
| .9109              | 63 1795                     | 1 8145                   | 48 8803            | 26 2718            | 2269               | .0891          |
| .9110              | 1.3469 3863                 | .1610 4679               | .2847 4374         | .4124 0635         | .9960 3163         | .0890          |
| .9111              | 75 5983                     | .1609 1206               | 45 9935            | 21 8538            | 4056               | .0889          |
| .9112  <br>  .9113 | 81 8154<br>88 03 <b>7</b> 8 | 7 7727<br>6 4242         | 44 5485<br>43 1024 | 19 6427<br>17 4301 | 4948<br>5839       | .0888          |
| .9114              | 1.3494 2654                 | 5 0751                   | 41 6552            | 15 2162            | 6729               | .0886          |
| .9115              | 1.3500 4983                 | 3 7254                   | 40 2069            | 13 0007            | 7618               | .0885          |
| .9116              | 06 7364                     | 2 3750                   | 38 7575            | 10 7839            | 8506               | .0884          |
| .9117              | 12 9797                     | .1601 0240               | 37 3070            | 08 5656            | .9960 9393         | .0883          |
| .9118<br>.9119     | 19 2284<br>25 4823          | .1599 6724<br>8 3202     | 35 8554<br>34 4028 | 06 3458<br>04 1246 | .9961 0279<br>1164 | .0882          |
| .9120              | 1.3531 7415                 | .1596 9673               | .2832 9490         | .4101 9020         | .9961 2047         | .0880          |
| .9121              | 38 0060                     | 5 6138                   | 31 4941            | .4099 6779         | 2930               | .0879          |
| .9122              | 44 2759                     | 4 2597                   | 30 0382            | 97 4524            | 3812               | .0878          |
| .9123              | 50 5511                     | 2 9050                   | 28 5811            | 95 2254            | 4693               | .0877          |
| .9124              | 56 8316                     | 1 5496                   | 27 1229            | 92 9969            | 5573               | .0876          |
| .9125<br>.9126     | 63 1174<br>69 4087          | .1590 1936<br>.1588 8370 | 25 6636<br>24 2033 | 90 7670<br>88 5357 | 6452<br>7330       | .0875          |
| .9127              | 75 7053                     | 7 4797                   | 22 7418            | 86 3029            | 8207               | .0873          |
| .9128              | 82 0073                     | 6 1219                   | 21 2791            | 84 0686            | 9083               | .0872          |
| .9129              | 88 3147                     | 4 7633                   | 19 8154            | 81 8328            | .9961 9957         | .0871          |
| .9130              | 1.3594 6275                 | .1583 4042               | .2818 3506         | .4079 5956         | .9962 0831         | .0870          |
| .9131              | 1.3600 9457<br>07 2693      | 2 0444<br>.1580 6840     | 16 8846<br>15 4176 | 77 3569<br>75 1167 | 1704<br>2576       | .0869          |
| .9133              | 13 5984                     | .1579 3230               | 13 9494            | 72 8750            | 3447               | .0867          |
| .9134              | 19 9330                     | 7 9613                   | 12 4800            | 70 6319            | 4316               | .0866          |
| .9135              | 26 2730                     | 6 5990                   | 11 0096            | 68 3873            | 5185               | .0865          |
| .9136              | 32 6185                     | 5 2360                   | 09 5380            | 66 1412            | 6053               | .0864          |
| .9137              | 38 9695                     | 3 8724<br>2 5082         | 08 0653<br>06 5915 | 63 8936<br>61 6445 | 6920               | .0863          |
| .9138              | 45 3260<br>51 6880          | .1571 1434               | 05 1166            | 59 3939            | 7785<br>8650       | .0862          |
| .9140              | 1.3658 0556                 | .1569 7779               | .2803 6405         | .4057 1419         | .9962 9514         | .0860          |
| .9141              | 64 4287                     | 8 4118                   | 02 1633            | 54 8883            | .9963 0376         | .0859          |
| .9142              | 70 8074                     | 7 0450                   | .2800 6849         | 52 6332            | 1238               | .0858          |
| .9143              | 77 1916                     | 5 6776                   | .2799 2054         | 50 3766            | 2099               | .0857          |
| .9144              | 83 5814<br>89 9768          | 4 3096<br>2 9409         | 97 7248<br>96 2430 | 48 1186<br>45 8590 | 2958<br>3817       | .0856          |
| .9146              | 1.3696 3778                 | 1 5716                   | 94 7601            | 43 5979            | 4675               | .0854          |
| .9147              | 1.3702 7844                 | .1560 2016               | 93 2760            | 41 3353            | 5531               | .0853          |
| .9148              | 09 1967                     | .1558 8310               | 91 7908            | 39 0712            | 6387               | .0852          |
| .9149              | 15 6146                     | 7 4598                   | 90 3045            | 36 8055            | 7242               | .0851          |
| .9150              | 1.3722 0381                 | 1.1556 0879              | .2788 8170         | .4034 5384         | .9963 8095         | .0850          |

 $E^{-1} = E^{1} = .0000,0007$  .0000,0001 .0000,0002 .0000,0000 .0000,0000+ .0000,00001

E-111 = E111 =0 00 0,0 00 0,+

.9150 .0850

| p     | x           | z          | $\sqrt{pq}$ | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|-------------|----------------|----------------|-------|
| .9150 | 1.3722 0381 | .1556 0879 | .2788 8170  | .4034 5384     | .9963 8095     | .0850 |
| .9151 | 28 4673     | 4 7154     | 87 3283     | 32 2697        | 8948           | .0849 |
| .9152 | 34 9022     | 3 3422     | 85 8385     | 29 9995        | .9963 9799     | .0848 |
| .9153 | 41 3428     | 1 9684     | 84 3475     | 27 7278        | .9964 0650     | .0847 |
| .9154 | 47 7891     | .1550 5939 | 82 8554     | 25 4545        | 1499           | .0846 |
| .9155 | 54 2411     | .1549 2188 | 81 3621     | 23 1797        | 2348           | .0845 |
| .9156 | 60 6988     | 7 8431     | 79 8676     | 20 9034        | 3195           | .0844 |
| .9157 | 67 1623     | 6 4667     | 78 3720     | 18 6255        | 4042           | .0843 |
| .9158 | 73 6315     | 5 0897     | 76 8752     | 16 3461        | 4887           | .0842 |
| .9159 | 80 1065     | 3 7120     | 75 3773     | 14 0651        | 5732           | .0841 |
| .9160 | 1.3786 5873 | .1542 3336 | .2773 8782  | .4011 7826     | .9964 6575     | .0840 |
| .9161 | 93 0739     | .1540 9546 | 72 3779     | 09 4986        | 7418           | .0839 |
| .9162 | 1.3799 5663 | .1539 5750 | 70 8764     | 07 2130        | 8259           | .0838 |
| .9163 | 1.3806 0645 | 8 1947     | 69 3738     | 04 9258        | 9100           | .0837 |
| .9164 | 12 5685     | 6 8138     | 67 8699     | 02 6371        | .9964 9939     | .0836 |
| .9165 | 19 0784     | 5 4322     | 66 3649     | .4000 3469     | .9965 0778     | .0835 |
| .9166 | 25 5942     | 4 0500     | 64 8588     | .3998 0550     | 1615           | .0834 |
| .9167 | 32 1158     | 2 6671     | 63 3514     | 95 7616        | 2452           | .0833 |
| .9168 | 38 6433     | .1531 2836 | 61 8429     | 93 4667        | 3287           | .0832 |
| .9169 | 45 1768     | .1529 8994 | 60 3331     | 91 1701        | 4121           | .0831 |
| .9170 | 1.3851 7161 | .1528 5145 | .2758 8222  | .3988 8720     | .9965 4955     | .0830 |
| .9171 | 58 2614     | 7 1290     | 57 3101     | 86 5723        | 5787           | .0829 |
| .9172 | 64 8126     | 5 7429     | 55 7968     | 84 2711        | 6618           | .0828 |
| .9173 | 71 3697     | 4 3561     | 54 2823     | 81 9682        | 7449           | .0827 |
| .9174 | 77 9329     | 2 9686     | 52 7666     | 79 6638        | 8278           | .0826 |
| .9175 | 84 5020     | 1 5805     | 51 2497     | 77 3578        | 9106           | .0825 |
| .9176 | 91 0771     | .1520 1917 | 49 7316     | 75 0502        | .9965 9934     | .0824 |
| .9177 | 1.3897 6582 | .1518 8023 | 48 2123     | 72 7410        | .9966 0760     | .0823 |
| .9178 | 1.3904 2454 | 7 4122     | 46 6918     | 70 4302        | 1585           | .0822 |
| .9179 | 10 8386     | 6 0214     | 45 1701     | 68 1178        | 2410           | .0821 |
| .9180 | 1.3917 4378 | .1514 6300 | .2743 6472  | .3965 8038     | .9966 3233     | .0820 |
| .9181 | 24 0431     | 3 2379     | 42 1231     | 63 4882        | 4055           | .0819 |
| .9182 | 30 6545     | 1 8452     | 40 5977     | 61 1710        | 4876           | .0818 |
| .9183 | 37 2720     | .1510 4518 | 39 0712     | 58 8522        | 5697           | .0817 |
| .9184 | 43 8956     | .1509 0577 | 37 5434     | 56 5318        | 6516           | .0816 |
| .9185 | 50 5253     | 7 6630     | 36 0144     | 54 2098        | 7334           | .0815 |
| .9186 | 57 1611     | 6 2676     | 34 4842     | 51 8861        | 8151           | .0814 |
| .9187 | 63 8031     | 4 8716     | 32 9528     | 49 5609        | 8968           | .0813 |
| .9188 | 70 4513     | 3 4749     | 31 4201     | 47 2340        | .9966 9783     | .0812 |
| .9189 | 77 1057     | 2 0775     | 29 8863     | 44 9054        | .9967 0597     | .0811 |
| .9190 | 1.3983 7662 | .1500 6795 | .2728 3512  | .3942 5753     | .9967 1410     | .0810 |
| .9191 | 90 4330     | .1499 2807 | 26 8148     | 40 2435        | 2222           | .0809 |
| .9192 | 1.3997 1059 | 7 8814     | 25 2772     | 37 9101        | 3033           | .0808 |
| .9193 | 1.4003 7851 | 6 4813     | 23 7384     | 35 5751        | 3844           | .0807 |
| .9194 | 10 4706     | 5 0806     | 22 1984     | 33 2384        | 4653           | .0806 |
| .9195 | 17 1624     | 3 6792     | 20 6571     | 30 9000        | 5461           | .0805 |
| .9196 | 23 8604     | 2 2772     | 19 1146     | 28 5600        | 6268           | .0804 |
| .9197 | 30 5647     | .1490 8745 | 17 5708     | 26 2184        | 7074           | .0803 |
| .9198 | 37 2753     | .1489 4711 | 16 0258     | 23 8751        | 7879           | .0802 |
| .9199 | 43 9923     | 8 0670     | 14 4795     | 21 5302        | 8683           | .0801 |
| .9200 | 1.4050 7156 | .1486 6623 | .2712 9320  | .3919 1836     | .9967 9486     | .0800 |

TABLE I

.9200 .0800

| .9200          |                        | ···                      |                    |                       |                    | .0800          |
|----------------|------------------------|--------------------------|--------------------|-----------------------|--------------------|----------------|
| p              | x                      | z                        | √pq                | $\sqrt{1-p^2}$        | $\sqrt{1-q^2}$     | q              |
| .9200          | 1.4050 7156            | .1486 6623               | .2712 9320         | .3919 1836            | .9967 9486         | .0800          |
| .9201          | 57 4453                | 5 2569                   | 11 3832            | 16 8353               | .9968 0288         | .0799          |
| .9202          | 64 1813                | 3 8508                   | 09 8332            | 14 4854               | 1089               | .0798          |
| .9203          | 70 9237                | 2 4440                   | 08 2819            | 12 1338               | 1890               | .0797          |
| .9204          | 77 6725                | .1481 0366               | 06 7294            | 09 7806               | 2689<br>3497       | .0796          |
| .9205<br>.9206 | 84 4278<br>91 1894     | .1479 6285<br>8 2197     | 05 1756<br>03 6205 | 07 4256<br>05 0690    | 3487<br>4284       | .0795<br>.0794 |
| .9207          | 1.4097 9576            | 6 8102                   | 02 0642            | 02 7107               | 5080               | .0793          |
| .9207          | 1.4104 7322            | 5 4001                   | .2700 5066         | .3900 3508            | 5875               | .0792          |
| .9209          | 11 5132                | 3 9893                   | .2698 9478         | .3897 9891            | 6669               | .0791          |
| .9210          | 1.4118 3008            | .1472 5778               | .2697 3876         | .3895 6258            | .9968 7462         | .0790          |
| .9211          | 25 0949                | .1471 1656               | 95 8262            | 93 2607               | 8254               | .0789          |
| .9212          | 31 8955                | .1469 7528               | 94 2635            | 90 8940               | 9045               | .0788          |
| .9213          | 38 7026                | 8 3393                   | 92 6996            | 88 5256               | .9968 9834         | .0787          |
| .9214<br>.9215 | 45 5163<br>52 3366     | 6 9250<br>5 5102         | 91 1343<br>89 5678 | 86 1554<br>83 7836    | .9969 0623<br>1411 | .0786<br>.0785 |
| .9216          | 59 1634                | 4 0946                   | 88 0000            | 81 4101               | 2198               | .0784          |
| .9217          | 65 9969                | 2 6783                   | 86 4309            | 79 0348               | 2984               | .0783          |
| .9218          | 72 8370                | .1461 2614               | 84 8605            | 76 6578               | 3769               | .0782          |
| .9219          | 79 6837                | .1459 8438               | 83 2888            | 74 2792               | 4553               | .0781          |
| .9220          | 1.4186 5371            | .1458 4254               | .2681 7159         | .3871 8988            | .9969 5336         | .0780          |
| .9221          | 1.4193 3971            | 7 0064                   | 80 1416            | 69 5166               | 6118               | .0779          |
| .9222<br>.9223 | 1.4200 2639<br>07 1373 | 5 5868<br>4 1664         | 78 5660<br>76 9892 | 67 1328<br>64 7472    | 6899<br>7679       | .0778<br>.0777 |
| 1              | İ                      |                          |                    |                       |                    | 1 1            |
| .9224          | 14 0175<br>20 9043     | 2 7453<br>.1451 3236     | 75 4110<br>73 8315 | 62 3599<br>59 9709    | 8457<br>.9969 9235 | .0776<br>.0775 |
| .9226          | 27 7980                | .1449 9012               | 72 2507            | 57 5801               | .9970 0012         | .0774          |
| .9227          | 34 6984                | 8 4780                   | 70 6686            | 55 1875               | 0788               | .0773          |
| .9228          | 41 6056                | 7 0542                   | 69 0852            | 52 7933               | 1563               | .0772          |
| .9229          | 48 5196                | 5 6297                   | 67 5005            | 50 3973               | 2336               | .0771          |
| .9230          | 1.4255 4404            | .1444 2045               | .2665 9145         | .3847 9995            | .9970 3109         | .0770          |
| .9231          | 62 3680                | 2 7786                   | 64 3271            | 45 6000               | 3881               | .0769          |
| .9232          | 69 3025<br>76 2439     | .1441 3520<br>.1439 9248 | 62 7384<br>61 1484 | 43 1987<br>40 7956    | 4652<br>5422       | .0768<br>.0767 |
| .9234          | 1                      |                          | 59 5571            | 38 3908               | ļ                  | 1 1            |
| .9235          | 83 1921<br>90 1473     | 8 4968<br>7 0681         | 57 9644            | 35 9842               | 6190<br>6958       | .0766<br>.0765 |
| .9236          | 1.4297 1094            | 5 6388                   | 56 3705            | 33 5759               | 7725               | .0764          |
| .9237          | 1.4304 0784            | 4 2087                   | 54 7751            | 31 1657               | 8491               | .0763          |
| .9238          | 11 0543                | 2 7779                   | 53 1785            | 28 7538               | .9970 9255         | .0762          |
| .9239          | 18 0373                | .1431 3465               | 51 5805            | 26 3402               | .9971 0019         | .0761          |
| .9240          | 1.4325 0272            | .1429 9143               | .2649 9811         | .3823 9247            | .9971 0782         | .0760          |
| .9241          | 32 0241<br>39 0281     | 8 4815<br>7 0479         | 48 3804<br>46 7784 | 21 5074<br>19 0884    | 1543<br>2304       | .0759<br>.0758 |
| .9243          | 46 0391                | 5 6137                   | 45 1750            | 16 6675               | 3064               | .0747          |
| .9244          | 53 0571                | 4 1787                   | 43 5703            | 14 2449               | 3823               | .0756          |
| .9245          | 60 0823                | 2 7431                   | 41 9642            | 11 8204               | 4580               | .0755          |
| .9246          | 67 1145                | .1421 3067               | 40 3568            | 09 3942               | 5337               | .0754          |
| .9247          | 74 1538                | .1419 8696               | 38 7480            | 06 9661               | 6092               | .0753          |
| .9248          | 81 2003<br>1.4388 2539 | 8 4319<br>6 9934         | 37 1378<br>35 5263 | 04 5362<br>.3802 1045 | 6847<br>7601       | .0752          |
| .9250          | 1.4395 3147            | .1415 5542               | .2633 9134         | .3799 6710            | ·                  | -              |
| .3430          | 1 1.727.7 214/         | .1717 7342               | 1 .2000 9104       | 1 .7177 0/10          | .9971 8353         | .0750          |

 $E^{-1}I = E^{1}I = .0000,0008$  .0000,0001 .0000,0002 .0000,0000 .0000,0000+ .0000,00001

 $E_{-111} = E_{111} = 000000000+$ 

.9250 .0750

| <b>n</b>       | x                      | Z                                 | √pq                | $\sqrt{1-p^2}$             | $\sqrt{1-q^2}$    | .0750          |
|----------------|------------------------|-----------------------------------|--------------------|----------------------------|-------------------|----------------|
| P 0250         | 1.4395 3147            | 1415 5542                         |                    |                            |                   | q              |
| .9250          |                        |                                   | .2633 9134         | .3799 6710                 | .9971 8353        | .0750          |
| .9251<br>.9252 | 02 3827<br>09 4578     | 4 1143<br>2 6737                  | 32 2992<br>30 6836 | 97 2357<br>94 <b>7</b> 985 | 9105<br>9856 9971 | .0749<br>.0748 |
| .9253          | 16 5402                | .1411 2324                        | 29 0666            | 92 3596                    | .9972 0605        | .0747          |
| .9254          | 23 6299                | .1409 7904                        | 27 4482            | 89 9187                    | 1354              | .0746          |
| .9255          | 30 7268                | 8 3477                            | 25 8284            | 87 4761                    | 2101              | .0745          |
| .9256          | 37 8309                | 6 9043                            | 24 2073            | 85 0316                    | 2848              | .0744          |
| .9257<br>.9258 | 44 9424<br>52 0611     | 5 4602                            | 22 5848            | 82 5852                    | 3593              | .0743          |
| .9259          | 59 1872                | 4 0153<br>2 5697                  | 20 9609<br>19 3356 | 80 1370<br>77 6870         | 4338<br>5082      | .0742<br>.0741 |
| .9260          | 1.4466 3207            | .1401 1235                        | .2617 7089         | .3775 2351                 | .9972 5824        | .0740          |
| .9261          | 73 4615                | .1399 6765                        | 16 0808            | 72 7813                    | 6566              | .0739          |
| .9262          | 80 6097                | 8 2288                            | 14 4514            | 70 3257                    | 7306              | .0738          |
| .9263          | 87 7653                | 6 7804                            | 12 8205            | 67 8682                    | 8046              | .0737          |
| .9264          | 1.4494 9283            | 5 3312                            | 11 1882            | 65 4089                    | 8784              | .0736          |
| .9265<br>.9266 | 1.4502 0988<br>09 2768 | 3 8814                            | 09 5546            | 62 9476                    | .9972 9522        | .0735          |
| 1              |                        | 2 4308                            | 07 9195            | 60 4845                    | .9973 0258        | .0734          |
| .9267<br>.9268 | 16 4622<br>23 6552     | .1390 9795<br>.1389 5275          | 06 2830<br>04 6451 | 58 0196<br>55 5527         | 0994<br>1728      | .0733<br>.0732 |
| .9269          | 30 8556                | 8 0748                            | 03 0058            | 53 0839                    | 2462              | .0731          |
| .9270          | 1.4538 0636            | .1386 6213                        | .2601 3650         | .3750 6133                 | .9973 3194        | .0730          |
| .9271          | 45 2792                | 5 1672                            | .2599 7229         | 48 1407                    | 3926              | .0729          |
| .9272          | 52 5023<br>50 7330     | 3 7123                            | 98 0793            | 45 6663                    | 4656              | .0728          |
| .9273          | 59 7330                | 2 2567                            | 96 4343            | 43 1899                    | 5385              | .0727          |
| .9274<br>.9275 | 66 9714<br>74 2174     | .1380 8003<br>.13 <b>7</b> 9 3433 | 94 7879<br>93 1400 | 40 7117<br>38 2315         | 6114<br>6841      | .0726<br>.0725 |
| .9276          | 81 4711                | 7 8855                            | 91 4907            | 35 7495                    | 7568              | .0724          |
| .9277          | 88 7324                | 6 4270                            | 89 8400            | 33 2655                    | 8293              | .0723          |
| .9278          | 1.4596 0014            | 4 9677                            | 88 1878            | 30 7795                    | 9017              | .0722          |
| .9279          | 1.4603 2782            | 3 5078                            | 86 5342            | 28 2917                    | .9973 9741        | .0721          |
| .9280          | 1.4610 5627            | .1372 0471                        | .2584 8791         | .3725 8019                 | .9974 0463        | .0720          |
| .9281          | 17 8550                | .1370 5857                        | 83 2226            | 23 3102                    | 1185              | .0719<br>.0718 |
| .9282          | 25 1550<br>32 4629     | .1369 1235<br>7 6606              | 81 5646<br>79 9052 | 20 8166<br>18 3210         | 1905<br>2624      | .0717          |
| .9284          | 39 7785                | 6 1970                            | 78 2444            | 15 8235                    | 3343              | .0716          |
| .9285          | 47 1020                | 4 7327                            | 76 5820            | 13 3240                    | 4060              | .0715          |
| .9286          | 54 4334                | 3 2676                            | 74 9183            | 10 8226                    | 4776              | .0714          |
| .9287          | 61 7727                | 1 8018                            | 73 2530            | 08 3192                    | 5492              | .0713          |
| .9288          | 69 1199<br>76 4750     | .1360 3352<br>.1358 8680          | 71 5863<br>69 9181 | 05 8138<br>03 3065         | 6206<br>6919      | .0712<br>.0711 |
| .9289          | 1.4683 8380            | .1357 4000                        | .2568 2484         | .3700 7972                 | .9974 7632        | .0710          |
|                |                        |                                   |                    | .3698 2860                 | 8343              | .0709          |
| .9291          | 91 2090<br>1.4698 5880 | 5 9312<br>4 4617                  | 66 5773<br>64 9047 | 95 7727                    | 9053              | .0708          |
| .9293          | 1.4705 9750            | 2 9915                            | 63 2306            | 93 2575                    | .9974 9762        | .0707          |
| .9294          | 13 3701                | 1 5205                            | 61 5550            | 90 7403                    | .9975 0471        | .0706          |
| .9295          | 20 7732                | .1350 0488                        | 59 8779<br>58 1994 | 88 2211<br>85 6999         | 1178<br>1884      | .0705          |
| .9296          | 28 1844                | .1348 5764                        |                    | 1                          | t                 | l .            |
| .9297          | 35 6037<br>43 0311     | 7 1032<br>5 6293                  | 56 5193<br>54 8378 | 83 1768<br>80 6516         | 2589<br>3294      | .0703          |
| .9299          | 50 4666                | 4 1546                            | 53 1547            | 78 1244                    | 3997              | .0701          |
| .9300          | 1.4757 9103            |                                   | .2551 4702         | .3675 5952                 | .9975 4699        | .0700          |
|                | 1.1171 7107            | 1.7 12 0/ / 1                     | 1 .2771 7702       | , ,,,,,                    | ,                 | ,              |

 $E^{-1} = E^{1} = 0000,0009$  .0000,0001 .0000,0002 .0000,0003 .0000,0000+ 00000002

<sup>000000000+</sup> E-111 = E<sub>111</sub> =000000004+

.9300 .0700

| p              | x                          | z                        | √pq                   | $\sqrt{1-p^2}$     | $\sqrt{1-q^2}$     | q              |
|----------------|----------------------------|--------------------------|-----------------------|--------------------|--------------------|----------------|
| .9300          | 1.4757 9103                | .1342 6791               | .2551 4702            | .3675 5952         | .9975 4699         | .0700          |
| .9301          | 65 3622                    | .1341 2030               | 49 7841               | 73 0640            | 5400               | .0699          |
| .9302          | 72 8223                    | .1339 7261               | 48 0965               | 70 5308            | 6101               | .0698          |
| .9303          | 80 2906                    | 8 2484                   | 46 4075               | 67 9955            | 6800               | .0697          |
| .9304<br>.9305 | 87 7672<br>1.4795 2521     | 6 7700<br>5 2909         | 44 7169<br>43 0248    | 65 4582<br>62 9189 | 7498<br>8195       | .0696<br>.0695 |
| .9306          | 1.4802 7452                | 3 8110                   | 41 3311               | 60 3776            | 8891               | .0694          |
| .9307          | 10 2467                    | 2 3303                   | 39 6360               | 57 8342            | .9975 9587         | .0693          |
| .9308          | 17 7565                    | .1330 8489<br>.1329 3668 | 37 9393<br>36 2411    | 55 2888<br>52 7413 | .9976 0281<br>0974 | .0692          |
| .9309          | 25 2747                    |                          |                       |                    |                    | .0691          |
| .9310          | 1.4832 8013                | .1327 8839               | .2534 5414            | .3650 1918         | .9976 1666         | .0690          |
| .9311          | 40 3363<br>47 8797         | 6 4002<br>4 9158         | 32 8401<br>31 1373    | 47 6402<br>45 0866 | 2357<br>3047       | .0689          |
| .9313          | 55 4316                    | 3 4306                   | 29 4329               | 42 5309            | 3736               | .0687          |
| .9314          | 62 9920                    | 1 9447                   | 27 7270               | 39 9731            | 4425               | .0686          |
| .9315          | 70 5608                    | .1320 4580               | 26 0196               | 37 4132            | 5112               | .0685          |
| .9316          | 78 1382                    | .1318 9706               | 24 3106               | 34 8513            | 5798               | .0684          |
| .9317          | 85 7242<br>1.4893 3187     | 7 4824<br>5 9934         | 22 6000<br>20 8879    | 32 2873<br>29 7212 | 6483<br>7167       | .0683          |
| .9319          | 1.4900 9218                | 4 5037                   | 19 1743               | 27 1530            | <b>7107 7850</b>   | .0681          |
| .9320          | 1.4908 5336                | .1313 0133               | .2517 4590            | .3624 5827         | .9976 8532         | .0680          |
| .9321          | 16 1540                    | 1 5220                   | 15 7422               | 22 0104            | 9213               | .0679          |
| .9322          | 23 7831                    | .1310 0300               | 14 0239               | 19 4359            | .9976 9893         | .0678          |
| .9323          | 31 4208                    | .1308 5373               | 12 3039               | 16 8593            | .9977 0572         | .0677          |
| .9324<br>.9325 | 39 0673<br>46 7225         | 7 0437<br>5 5495         | 10 5824<br>08 8593    | 14 2806<br>11 6997 | 1250<br>1927       | .0676<br>.0675 |
| .9326          | 54 3865                    | 4 0544                   | 07 1346               | 09 1168            | 2603               | .0674          |
| .9327          | 62 0593                    | 2 5586                   | 05 4083               | 06 5317            | 3278               | .0673          |
| .9328          | 69 7409                    | .1301 0620               | 03 6805               | 03 9445            | 3953               | .0672          |
| .9329          | 77 4314                    | .1299 5646               | 01 9510               | .3601 3552         | 4626               | .0671          |
| .9330          | 1.4985 1307                | .1298 0665               | .2500 2200            | .3598 7637         | .9977 5298         | .0670          |
| .9331          | 1.4992 8389<br>1.5000 5560 | 6 5676<br>5 0679         | .2498 4873<br>96 7531 | 96 1700<br>93 5743 | 5969<br>6639       | .0669          |
| .9333          | 08 2821                    | 3 5675                   | 95 0172               | 90 9763            | 7308               | .0667          |
| .9334          | 16 0172                    | 2 0663                   | 93 2798               | 88 3762            | 7976               | .0666          |
| .9335          | 23 7612                    | .1290 5643               | 91 5407               | 85 7740            | 8643               | .0665          |
| .9336          | 31 5142                    | .1289 0615               | 89 8000               | 83 1695            | 9308               | .0664          |
| .9337          | 39 2763                    | 7 5580                   | 88 0577               | 80 5629            | .9977 9973         | .0663          |
| .9338<br>.9339 | 47 0475<br>54 8278         | 6 0537<br>4 5486         | 86 3137<br>84 5682    | 77 9542<br>75 3432 | .9978 0637<br>1300 | .0662          |
| .9340          | 1.5062 6172                | .1283 0427               | .2482 8210            | .3572 7300         | .9978 1962         | .0660          |
| .9341          | 70 4158                    | 1 5361                   | 81 0721               | 70 1147            | 2623               | .0659          |
| .9342          | 78 2235                    | .1280 0286               | 79 3217               | 67 4972            | 3283               | .0658          |
| .9343          | 86 0404                    | .1278 5204               | 77 5696               | 64 8774            | 3942               | .0657          |
| .9344<br>.9345 | 1.5093 8666<br>1.5101 7020 | 7 0114<br>5 5016         | 75 8158<br>74 0604    | 62 2555<br>59 6313 | 4600<br>5257       | .0656          |
| .9346          | 09 5467                    | 3 9911                   | 72 3034               | 57 0049            | 5913               | .0654          |
| .9347          | 17 4007                    | 2 4797                   | 70 5447               | 54 3763            | 6568               | .0653          |
| .9348          | 25 2641                    | .1270 9676               | 68 7843               | 51 7455            | 7222               | .0652          |
| .9349          | 33 1368                    | .1269 4547               | 67 0223               | 49 1124            | 7875               | .0651          |
| .9350          | 1.5141 0189                | .1267 9410               | .2465 2586            | .3546 4771         | .9978 8526         | .0650          |

E<sup>-11</sup> ε<sup>11</sup>=.0000,0011 ·.0000,0001 .0000,0002 .0000,0003 .0000,0000+

E-III = E III =0000,0000,+

| p                | x                                  | z                        | √pq                | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$           | q              |
|------------------|------------------------------------|--------------------------|--------------------|--------------------------|--------------------------|----------------|
| 9350             | 1.5141 0189                        | .1267 9410               | .2465 2586         | .3546 4771               | .9978 8526               | .0650          |
| 9351             | 48 9104                            | 6 4265                   | 63 4933            | 43 8396                  | 9177                     | .0649          |
| 9352             | 56 8114                            | 4 9112                   | 61 7262            | 41 1998                  | .9978 9827               | .0648          |
| 9353             | 64 7218                            | 3 3951                   | 59 9575            | 38 5578                  | .9979 0476               | .0647          |
| 9354             | 72 6417                            | 1 8782                   | 58 1871            | 35 9135                  | 1124                     | .0646          |
| 9355<br>9356     | 80 5712<br>88 5102                 | .1260 3606<br>.1258 8421 | 56 4151<br>54 6413 | 33 2669<br>30 6181       | 1771<br>2417             | .0645<br>.0644 |
|                  |                                    |                          | l                  |                          |                          |                |
| 9357<br>9358     | 1.5196 4588<br>1.5204 4170         | 7 3229<br>5 8028         | 52 8659<br>51 0887 | 27 9670<br>25 3136       | 3061<br>3705             | .0643<br>.0642 |
| 9359             | 12 3849                            | 4 2820                   | 49 3099            | 22 6579                  | 4348                     | .0641          |
| 9360             | 1.5220 3624                        | .1252 7604               | .2447 5294         | .3520 0000               | .9979 4990               | .0640          |
| 9361             | 28 3496                            | .1251 2379               | 45 7471            | 17 3398                  | 5631                     | .0639          |
| 9362             | 36 3466                            | .1249 7147               | 43 9632            | 14 6772                  | 6270                     | .0638          |
| 9363             | 44 3533                            | 8 1906                   | 42 1775            | 12 0124                  | 6909                     | .0637          |
| 9364             | 52 3698                            | 6 6658                   | 40 3901            | 09 3452                  | 7547                     | .0636          |
| 9365             | 60 3961<br>68 4323                 | 5 1402<br>3 6137         | 38 6010<br>36 8102 | 06 6758<br>04 0040       | 8184<br>8820             | .0635          |
|                  |                                    |                          | '                  |                          |                          |                |
| 9367<br>9368     | 76 4783<br>84 5342                 | 2 0865<br>.1240 5584     | 35 0177<br>33 2234 | .3501 3299<br>.3498 6535 | .9979 9454<br>.9980 0088 | .0633          |
| 9369             | 1.5292 6001                        | .1239 0296               | 31 4274            | 95 9747                  | 0721                     | .0631          |
| 9370             | 1.5300 6759                        | .1237 4999               | .2429 6296         | .3493 2936               | .9980 1353               | .0630          |
| 9371             | 08 7617                            | 5 9694                   | 27 8301            | 90 6101                  | 1983                     | .0629          |
| 9372             | 16 8575                            | 4 4382                   | 26 0289            | 87 9243                  | 2613                     | .0628          |
| .9373            | 24 9634                            | 2 9061                   | 24 2259            | 85 2361                  | 3242                     | .0627          |
| 9374             | 33 0794                            | .1231 3732               | 22 4211            | 82 5456                  | 3870                     | .0626          |
| .9375  <br>.9376 | 41 2054<br>49 3417                 | .1229 8395<br>8 3049     | 20 6146<br>18 8063 | 79 8527<br>77 1575       | 4496<br>5122             | .0624          |
| 9377             | 57 4881                            | 6 7696                   | 16 9963            | 74 4598                  | 5747                     | .0623          |
| 9378             | 65 6447                            | 5 2334                   | 15 1845            | 71 7598                  | 6371                     | .0622          |
| 9379             | 73 8115                            | 3 6965                   | 13 3709            | 69 0574                  | 6993                     | .0621          |
| 9380             | 1.5381 9886                        | .1222 1587               | .2411 5555         | .3466 3525               | .9980 7615               | .0620          |
| 9381             | 90 1760                            | .1220 6201               | 09 7384            | 63 6453                  | 8236                     | .0619          |
| .9382<br>.9383   | 1.5398 373 <b>7</b><br>1.5406 5818 | .1219 0806<br>7 5404     | 07 9194<br>06 0987 | 60 9357<br>58 2237       | 8855<br>.9980 9474       | .0618<br>.0617 |
|                  |                                    |                          | 1                  | i                        |                          |                |
| .9384<br>.9385   | 14 8003<br>23 0292                 | 5 9993<br>4 4574         | 04 2762<br>02 4519 | 55 5092<br>52 7923       | .9981 0092<br>0708       | .0616          |
| 9386             | 31 2685                            | 2 9147                   | .2400 6258         | 50 0730                  | 1324                     | .0614          |
| 9387             | 39 5184                            | .1211 3712               | .2398 7978         | 47 3513                  | 1939                     | .0613          |
| 9388             | 47 7788                            | .1209 8268               | 96 9681            | 44 6271                  | 2552                     | .061           |
| 9389             | 56 0497                            | 8 2816                   | 95 1365            | 41 9005                  | 3165                     | .061           |
| 9390             | 1.5464 3312                        | .1206 7356               | .2393 3032         | .3439 1714               | .9981 3777               | .0610          |
| .9391            | 72 6233                            | 5 1887                   | 91 4680            | 36 4399                  | 4387                     | .060           |
| .9392<br>.9393   | 80 9261<br>89 2396                 | 3 6411<br>2 0926         | 89 6309<br>87 7921 | 33 7059<br>30 9694       | 4997<br>5605             | .060           |
|                  |                                    | .1200 5432               | 85 9514            | 28 2304                  | 6213                     | .060           |
| .9394<br>.9395   | 1.5497 5638<br>1.5505 8987         | .1200 5432               | 84 1088            | 28 2304<br>25 4890       | 6820                     | .060           |
| 9396             | 14 2444                            | 7 4420                   | 82 2645            | 22 7451                  | 7425                     | .060           |
| 9397             | 22 6010                            | 5 8902                   | 80 4182            | 19 9987                  | 8030                     | .060           |
| . 9398           | 30 9684                            | 4 3375                   | 78 5702            | 17 2498                  | 8634                     | .060           |
| .9399            | 39 3467                            | 2 7840                   | 76 7202            | 14 4984                  | 9236                     | .060           |
| 9400             | 1.5547 7359                        | .1191 2297               | .2374 8684         | .3411 7444               | .9981 9838               | .060           |
| -11_             | E <sup>11</sup> =0000,0013         | .0000,0001               | .0000,0003         | .0000,0003               | .0000,0000+              |                |

 $E^{-111} = E^{111} = 000000000+$ 

.9400 .0600

| p     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .9400 | 1.5547 7359 | .1191 2297 | .2374 8684 | .3411 7444     | .9981 9838     | .0600 |
| .9401 | 56 1361     | .1189 6745 | 73 0147    | 08 9880        | .9982 0438     | .0599 |
| .9402 | 64 5472     | 8 1184     | 71 1592    | 06 2290        | 1038           | .0598 |
| .9403 | 72 9694     | 6 5615     | 69 3018    | 03 4675        | 1636           | .0597 |
| .9404 | 81 4027     | 5 0038     | 67 4425    | .3400 7035     | 2234           | .0596 |
| .9405 | 89 8471     | 3 4453     | 65 5813    | .3397 9369     | 2831           | .0595 |
| .9406 | 1.5598 3025 | 1 8859     | 63 7183    | 95 1677        | 3426           | .0594 |
| .9407 | 1.5606 7692 | .1180 3256 | 61 8533    | 92 3961        | 4021           | .0593 |
| .9408 | 15 2470     | .1178 7645 | 59 9864    | 89 6218        | 4614           | .0592 |
| .9409 | 23 7361     | 7 2026     | 58 1177    | 86 8450        | 5207           | .0591 |
| .9410 | 1.5632 2365 | .1175 6398 | .2356 2470 | .3384 0656     | .9982 5798     | .0590 |
| .9411 | 40 7482     | 4 0761     | 54 3744    | 81 2836        | 6389           | .0589 |
| .9412 | 49 2712     | 2 5116     | 52 4999    | 78 4991        | 6978           | .0588 |
| .9413 | 57 8056     | .1170 9463 | 50 6235    | 75 7119        | 7567           | .0587 |
| .9414 | 66 3514     | .1169 3800 | 48 7452    | 72 9222        | 8154           | .0586 |
| .9415 | 74 9087     | 7 8130     | 46 8649    | 70 1298        | 8741           | .0585 |
| .9416 | 83 4774     | 6 2451     | 44 9827    | 67 3349        | 9326           | .0584 |
| .9417 | 1.5692 0577 | 4 6763     | 43 0986    | 64 5373        | .9982 9911     | .0583 |
| .9418 | 1.5700 6496 | 3 1067     | 41 2125    | 61 7371        | .9983 0494     | .0582 |
| .9419 | 09 2531     | .1161 5362 | 39 3245    | 58 9342        | 1077           | .0581 |
| .9420 | 1.5717 8682 | .1159 9648 | .2337 4345 | .3356 1287     | .9983 1658     | .0580 |
| .9421 | 26 4950     | 8 3926     | 35 5425    | 53 3206        | 2239           | .0579 |
| .9422 | 35 1335     | 6 8195     | 33 6486    | 50 5098        | 2818           | .0578 |
| .9423 | 43 7838     | 5 2456     | 31 7528    | 47 6964        | 3397           | .0577 |
| .9424 | 52 4459     | 3 6707     | 29 8549    | 44 8803        | 3974           | .0576 |
| .9425 | 61 1198     | 2 0951     | 27 9551    | 42 0615        | 4551           | .0575 |
| .9426 | 69 8055     | .1150 5185 | 26 0533    | 39 2400        | 5126           | .0574 |
| .9427 | 78 5032     | .1148 9411 | 24 1495    | 36 4159        | 5701           | .0573 |
| .9428 | 87 2129     | 7 3628     | 22 2437    | 33 5891        | 6274           | .0572 |
| .9429 | 1.5795 9345 | 5 7837     | 20 3360    | 30 7595        | 6846           | .0571 |
| .9430 | 1.5804 6682 | .1144 2036 | .2318 4262 | .3327 9273     | .9983 7418     | .0570 |
| .9431 | 13 4139     | 2 6227     | 16 5144    | 25 0923        | 7988           | .0569 |
| .9432 | 22 1718     | .1141 0409 | 14 6006    | 22 2547        | 8558           | .0568 |
| .9433 | 30 9418     | .1139 4583 | 12 6848    | 19 4143        | 9126           | .0567 |
| .9434 | 39 7240     | 7 8748     | 10 7670    | 16 5711        | .9983 9694     | .0566 |
| .9435 | 48 5185     | 6 2903     | 08 8471    | 13 7252        | .9984 0260     | .0565 |
| .9436 | 57 3252     | 4 7051     | 06 9252    | 10 8766        | 0825           | .0564 |
| .9437 | 66 1442     | 3 1189     | 05 0013    | 08 0252        | 1390           | .0563 |
| .9438 | 74 9756     | .1131 5318 | 03 0753    | 05 171:        | 1953           | .0562 |
| .9439 | 83 8194     | .1129 9439 | .2301 1473 | .3302 3142     | 2515           | .0561 |
| .9440 | 1.5892 6756 | .1128 3551 | .2299 2173 | .3299 4545     | .9984 3077     | .0560 |
| .9441 | 1.5901 5443 | 6 7654     | 97 2851    | 96 5920        | 3637           | .0559 |
| .9442 | 10 4255     | 5 1748     | 95 3510    | 93 7268        | 4197           | .0558 |
| .9443 | 19 3193     | 3 5833     | 93 4147    | 90 8587        | 4755           | .0557 |
| .9444 | 28 2257     | 1 9909     | 91 4764    | 87 9878        | 5312           | .0556 |
| .9445 | 37 1448     | .1120 3976 | 89 5360    | 85 1142        | 5869           | .0555 |
| .9446 | 46 0765     | .1118 8035 | 87 5935    | 82 2377        | 6424           | .0554 |
| .9447 | 55 0210     | 7 2084     | 85 6489    | 79 3583        | 6978           | .0553 |
| .9448 | 63 9783     | 5 6125     | 83 7023    | 76 4762        | 7532           | .0552 |
| .9449 | 72 9484     | 4 0156     | 81 7535    | 73 5911        | 8084           | .0551 |
| .9450 | 1.5981 9314 | .1112 4179 | .2279 8026 | .3270 7033     | .9984 8635     | .0550 |

E<sup>-11</sup> E<sup>11</sup> .0000,0015 .0000,0001 .0000,0003 .0000,0003 .0000,0000+

 $E^{-111} = E^{111} = 000000000+$ 

.9450 .0550

| p     | x           | z          | √pq        | $\sqrt{1-p^2}$ | $\sqrt{1-q^2}$ | q     |
|-------|-------------|------------|------------|----------------|----------------|-------|
| .9450 | 1.5981 9314 | .1112 4179 | .2279 8026 | .3270 7033     | .9984 8635     | .0550 |
| .9451 | 90 9273     | .1110 8192 | 77 8496    | 67 8126        | 9186           | .0549 |
| .9452 | 1.5999 9361 | .1109 2197 | 75 8945    | 64 9190        | .9984 9735     | .0548 |
| .9453 | 1.6008 9580 | 7 6192     | 73 9373    | 62 0225        | .9985 0283     | .0547 |
| .9454 | 17 9929     | 6 0179     | 71 9780    | 59 1232        | 0831           | .0546 |
| .9455 | 27 0409     | 4 4156     | 70 0165    | 56 2210        | 1377           | .0545 |
| .9456 | 36 1020     | 2 8125     | 68 0529    | 53 3158        | 1922           | .0544 |
| .9457 | 45 1764     | .1101 2084 | 66 0872    | 50 4078        | 2467           | .0543 |
| .9458 | 54 2639     | .1099 6034 | 64 1193    | 47 4969        | 3010           | .0542 |
| .9459 | 63 3647     | 7 9976     | 62 1492    | 44 5830        | 3552           | .0541 |
| .9460 | 1.6072 4789 | .1096 3908 | .2260 1770 | .3241 6662     | .9985 4094     | .0540 |
| .9461 | 81 6064     | 4 7831     | 58 2026    | 38 7465        | 4634           | .0539 |
| .9462 | 90 7474     | 3 1744     | 56 2261    | 35 8239        | 5173           | .0538 |
| .9463 | 1.6099 9018 | .1091 5649 | 54 2473    | 32 8982        | 5711           | .0537 |
| .9464 | 1.6109 0697 | .1089 9545 | 52 2664    | 29 9697        | 6249           | .0536 |
| .9465 | 18 2512     | 8 3431     | 50 2833    | 27 0381        | 6785           | .0535 |
| .9466 | 27 4463     | 6 7308     | 48 2980    | 24 1036        | 7320           | .0534 |
| .9467 | 36 6550     | 5 1176     | 46 3105    | 21 1661        | 7854           | .0533 |
| .9468 | 45 8775     | 3 5035     | 44 3208    | 18 2256        | 8388           | .0532 |
| .9469 | 55 1137     | 1 8884     | 42 3289    | 15 2821        | 8920           | .0531 |
| .9470 | 1.6164 3637 | .1080 2725 | .2240 3348 | .3212 3356     | .9985 9451     | .0530 |
| .9471 | 73 6276     | .1078 6556 | 38 3384    | 09 3861        | .9985 9981     | .0529 |
| .9472 | 82 9053     | 7 0377     | 36 3399    | 06 4335        | .9986 0511     | .0528 |
| .9473 | 1.6192 1970 | 5 4190     | 34 3391    | 03 4780        | 1039           | .0527 |
| .9474 | 1.6201 5027 | 3 7993     | 32 3360    | .3200 5193     | 1566           | .0526 |
| .9475 | 10 8225     | 2 1787     | 30 3307    | .3197 5577     | 2092           | .0525 |
| .9476 | 20 1564     | .1070 5571 | 28 3231    | 94 5929        | 2618           | .0524 |
| .9477 | 29 5044     | .1068 9346 | 26 3133    | 91 6251        | 3142           | .0523 |
| .9478 | 38 8666     | 7 3112     | 24 3012    | 88 6543        | 3665           | .0522 |
| .9479 | 48 2431     | 5 6869     | 22 2869    | 85 6803        | 4187           | .0521 |
| .9480 | 1.6257 6339 | .1064 0616 | .2220 2703 | .3182 7033     | .9986 4708     | .0520 |
| .9481 | 67 0390     | 2 4353     | 18 2513    | 79 7231        | 5229           | .0519 |
| .9482 | 76 4586     | .1060 8082 | 16 2301    | 76 7398        | 5748           | .0518 |
| .9483 | 85 8926     | .1059 1801 | 14 2066    | 73 7535        | 6266           | .0517 |
| .9484 | 1.6295 3412 | 7 5510     | 12 1808    | 70 7639        | 6783           | .0516 |
| .9485 | 1.6304 8043 | 5 9210     | 10 1527    | 67 7713        | 7299           | .0515 |
| .9486 | 14 2820     | 4 2900     | 08 1223    | 64 7755        | 7815           | .0514 |
| .9487 | 23 7744     | 2 6581     | 06 0895    | 61 7766        | 8329           | .0513 |
| .9488 | 33 2815     | .1051 0253 | 04 0544    | 58 7744        | 8842           | .0512 |
| .9489 | 42 8034     | .1049 3915 | .2202 0170 | 55 7692        | 9354           | .0511 |
| .9490 | 1.6352 3402 | .1047 7567 | .2199 9773 | .3152 7607     | .9986 9865     | .0510 |
| .9491 | 61 8919     | 6 1210     | 97 9352    | 49 7490        | .9987 0375     | .0509 |
| .9492 | 71 4585     | 4 4843     | 95 8907    | 46 7342        | 0885           | .0508 |
| .9493 | 81 0401     | 2 8467     | 93 8439    | 43 7161        | 1393           | .0507 |
| .9494 | 1.6390 6368 | .1041 2081 | 91 7947    | 40 6948        | 1900           | .0506 |
| .9495 | 1.6400 2486 | .1039 5686 | 89 7431    | 37 6703        | 2406           | .0505 |
| .9496 | 09 8755     | 7 9281     | 87 6892    | 34 6426        | 2911           | .0504 |
| .9497 | 19 5177     | 6 2866     | 85 6329    | 31 6116        | 3415           | .0503 |
| .9498 | 29 1752     | 4 6442     | 83 5741    | 28 5773        | 3919           | .0502 |
| .9499 | 38 8481     | 3 0008     | 81 5130    | 25 5398        | 4421           | .0501 |
| .9500 | 1.6448 5363 | .1031 3564 | .2179 4495 | .3122 4990     | .9987 4922     | .0500 |

 $E^{-11} = E^{11} = .0000,0018$  .0000,0001 .0000,0003 .0000,0004 .0000,0000+ .0000,00002

E-111 = E 111 =000 0,000 0,+

.9500 .0500

| P              | x                          | Z                        | √pq                      | $\sqrt{1-p^2}$        | $\sqrt{1-q^2}$           | q              |
|----------------|----------------------------|--------------------------|--------------------------|-----------------------|--------------------------|----------------|
| .9500          | 1.6448 5363                | .1031 3564               | .2179 4495               | .3122 4990            | .9987 4922               | .0500          |
| .9501          | 58 2400                    | .1029 7111               | 77 3835                  | 19 4549               | 5422                     | .0499          |
| .9502          | 67 9592                    | 8 0648                   | 75 3151                  | 16 4075               | 5921                     | .0498          |
| .9503          | 77 6940                    | 6 4175                   | 73 2443                  | 13 3569               | 6419                     | .0497          |
| .9504          | 87 4445                    | 4 7692                   | 71 1711                  | 10 3029               | 6916                     | .0496          |
| .9505          | 1.6497 2106                | 3 1200<br>.1021 4698     | 69 0954<br>67 0173       | 07 2456<br>04 1849    | 7412<br>7907             | .0495          |
| .9506          | 1.6506 9925                |                          |                          |                       |                          | .0494          |
| .9507          | 16 7903                    | .1019 8186               | 64 9367                  | .3101 1209            | 8402                     | .0493          |
| .9508          | 26 6039                    | 8 1664                   | 62 8537<br>60 7682       | .3098 0536<br>94 9829 | 8895<br>938 <b>7</b>     | .0492          |
| .9509          | 36 4334                    | 6 5133                   |                          |                       |                          | .0491          |
| .9510          | 1.6546 2790                | .1014 8591               | .2158 6802               | .3091 9088            | .9987 9878               | .0490          |
| .9511          | 56 1406                    | 3 2040                   | 56 5897                  | 88 8313               | .9988 0368               | .0489          |
| .9512          | 66 0184                    | .1011 5479               | 54 4967                  | 85 7505               | 0857                     | .0488          |
| .9513          | 75 9123                    | .1009 8908               | 52 4012                  | 82 6662               | 1345                     | .0487          |
| .9514          | 85 8225                    | 8 2327                   | 50 3032                  | 79 5785               | 1832                     | .0486          |
| .9515          | 1.6595 7490                | 6 5736                   | 48 2027                  | 76 4874               | 2318                     | .0485          |
| .9516          | 1.6605 6919                | 4 9136                   | 46 0997                  | 73 3929               | 2803                     | .0484          |
| .9517          | 15 6513                    | 3 2525                   | 43 9942                  | 70 2949               | 3287                     | .0483          |
| .9518<br>.9519 | 25 6271<br>35 6195         | .1001 5904<br>.0999 9274 | 41 8861<br>39 7755       | 67 1935<br>64 0886    | 3770<br><b>42</b> 53     | .0482<br>.0481 |
| .9520          | 1.6645 6286                | .0998 2633               | .2137 6623               | .3060 9802            | .9988 4734               | .0480          |
|                |                            |                          |                          |                       |                          |                |
| .9521<br>.9522 | 55 6544<br>65 6969         | 6 5982<br>4 9322         | 35 5465<br>33 4282       | 57 8684<br>54 7530    | 5214<br>5693             | .0479<br>.0478 |
| .9523          | 75 7563                    | 3 2651                   | 31 3073                  | 51 6342               | 6171                     | .0477          |
|                |                            |                          | ì                        |                       |                          |                |
| .9524          | 85 8325<br>1.6695 9258     | .0991 5970<br>.0989 9279 | 29 1839<br>27 0578       | 48 5118<br>45 3859    | 6648                     | .0476          |
| .9525<br>.9526 | 1.6706 0361                | 8 2578                   | 24 9292                  | 42 2564               | 7124<br>7599             | .0475<br>.0474 |
|                |                            |                          | 22 7979                  | 39 1234               | 8073                     |                |
| .9527<br>.9528 | 16 1634<br>26 3080         | 6 5867<br>4 9146         | 20 6640                  | 35 9868               | 8546                     | .0473<br>.0472 |
| .9529          | 36 4698                    | 3 2415                   | 18 5276                  | 32 8467               | 9018                     | .0471          |
| .9530          | 1.6746 6489                | .0981 5673               | .2116 3884               | .3029 7030            | .9988 9489               | .0470          |
|                |                            |                          |                          |                       |                          |                |
| .9531<br>.9532 | 56 8454<br>67 0593         | .0979 8921<br>8 2159     | 14 2467<br>12 1023       | 26 5556<br>23 4047    | .9988 9959<br>.9989 0428 | .0469<br>.0468 |
| .9533          | 77 2908                    | 6 5387                   | 09 9552                  | 20 2502               | 0896                     | .0467          |
|                |                            | 1                        | 1                        | i                     | ·                        |                |
| .9534          | 87 5399                    | 4 8605                   | 07 8055                  | 17 0920               | 1363                     | .0466          |
| .9535<br>.9536 | 1.6797 8066<br>1.6808 0911 | 3 1812<br>.0971 5009     | 05 6531                  | 13 9302<br>10 7647    | 1829<br>2294             | .0465          |
|                |                            | i                        |                          |                       |                          |                |
| .9537<br>.9538 | 18 3933<br>28 7135         | .0969 8196<br>8 1372     | .2101 3403<br>.2099 1798 | 07 5956<br>04 4227    | 2758<br>3221             | .0463          |
| .9539          | 39 0516                    | 6 4539                   | 97 0167                  | .3001 2462            | 3683                     | .0461          |
| .9540          | 1.6849 4077                | .0964 7694               | .2094 8508               | .2998 0660            | .9989 4144               |                |
|                |                            |                          | <u> </u>                 |                       |                          | .0460          |
| .6541          | 59 7819                    | 3 0840                   | 92 6823                  | 94 8821               | 4604                     | .0459          |
| .9542<br>.9543 | 70 1743<br>80 5850         | .0961 3975<br>.0959 7099 | 90 5109<br>88 3369       | 91 6945<br>88 5031    | 5063<br>5521             | .0458<br>.0457 |
|                |                            |                          |                          | i                     | l                        |                |
| .9544<br>.9545 | 1.6891 0140<br>1.6901 4614 | 8 0214<br>6 3317         | 86 1601<br>83 9806       | 85 3080<br>82 1092    | 5978<br>6434             | .0456          |
| .9546          | 11 9273                    | 4 6411                   | 81 7983                  | 78 9065               | 6434<br>6889             | .0455          |
| 1              | 1                          | 1                        | i                        |                       |                          | 1              |
| .9547          | 22 4117                    | 2 9493                   | 79 6132                  | 75 7001               | 7343                     | .0453          |
| .9548<br>.9549 | 32 9147<br>43 4365         | .0951 2566<br>.0949 5628 | 77 4253<br>75 2347       | 72 4899<br>69 2758    | 7796<br>8248             | .0452          |
|                |                            |                          |                          |                       |                          | <del></del>    |
| .9550          | 1.6953 9771                | .0947 8679               | .2073 0412               | .2966 0580            | .9989 8699               | .0450          |

E<sup>-1</sup>L E<sup>1</sup>L-.0000,0021 .0000,0001 .0000,0003 .0000,0004 .0000,0000+

E-111 = E111 =0000,0000,+

.9550 .0450

| .5000          |                    |                      |                    |                    |                  | .0450          |
|----------------|--------------------|----------------------|--------------------|--------------------|------------------|----------------|
| p              | x                  | , z                  | √pq                | $\sqrt{1-p^2}$     | $\sqrt{1-q^2}$   | q              |
| .9550          | 1.6953 9771        | .0947 8679           | .2073 0412         | .2966 0580         | .9989 8699       | .0450          |
| .9551          | 64 5365            | 6 1720               | 70 8450            | 62 8363            | 9149             | .0449          |
| .9552          | 75 1149            | 4 4750               | 68 6459            | 59 6108            | .9989 9598       | .0448          |
| .9553          | 85 7124            | 2 7769               | 66 4440            | 56 3814            | .9990 0046       | .0447          |
| .9554          | 1.6996 3289        | .0941 0778           | 64 2393            | 53 1482            | 0492             | .0446          |
| .9555          | 1.7006 9646        | .0939 3777           | 62 0318            | 49 9110            | 0938             | .0445          |
| .9556          | 17 6196            | 7 6765               | 59 8214            | 46 6700            | 1383             | .0444          |
| .9557          | 28 2940            | 5 9742               | 57 6081            | 43 4250            | 1827             | .0443          |
| .9558          | 38 9878            | 4 2708               | 55 3919            | 40 1762            | 2270             | .0442          |
| .9559          | 49 7011            | 2 5664               | 53 1729            | 36. 9234           | 2712             | .0441          |
| .9560          | 1.7060 4340        | .0930 8608           | .2050 9510         | .2933 6666         | .9990 3153       | .0440          |
| .9561          | 71 1866            | .0929 1543           | 48 7262            | 30 4059            | 3593             | .0439          |
| .9562          | 81 9590            | 7 4466               | 46 4985            | 27 1413            | 4032             | .0438          |
| .9563          | 1.7092 7512        | 5 7379               | 44 2678            | 23 8726            | <del>44</del> 70 | .0437          |
| .9564          | 1.7103 5634        | 4 0281               | 42 0343            | 20 5999            | 4907             | .0436          |
| .9565<br>.9566 | 14 3956<br>25 2479 | 2 3172<br>.0920 6052 | 39 7978<br>37 5583 | 17 3233<br>14 0426 | 5343<br>5778     | .0435<br>.0434 |
| 1              |                    |                      |                    |                    |                  | 1              |
| .9567<br>.9568 | 36 1205            | .0918 8921           | 35 3159            | 10 7578            | 6212             | .0433          |
| .9569          | 47 0133<br>57 9265 | 7 1780<br>5 4627     | 33 0706<br>30 8222 | 07 4690<br>04 1761 | 6644<br>7076     | .0432<br>.0431 |
| .9570          | 1.7168 8602        | .0913 7464           | .2028 5709         | .2900 8792         | .9990 7507       | .0430          |
| .9571          | 79 8144            | 2 0289               | 26 3166            | .2897 5781         | 7937             | .0429          |
| .9572          | 1.7190 7893        | .0910 3104           | 24 0593            | 94 2730            | 8366             | .0428          |
| .9573          | 1.7201 7850        | .0908 5908           | 21 7990            | 90 9637            | 8794             | .0427          |
| .9574          | 12 8015            | 6 8701               | 19 5356            | 87 6503            | 9221             | .0426          |
| .9575          | 23 8389            | 5 1482               | 17 2692            | 84 3327            | .9990 9647       | .0425          |
| .9576          | 34 8973            | 3 4253               | 14 9998            | 81 0109            | .9991 0072       | .0424          |
| .9577          | 45 9769            | .0901 7012           | 12 7273            | 77 6850            | 0495             | .0423          |
| .9578          | 57 0777            | .0899 9761           | 10 4517            | 74 3549            | 0918             | .0422          |
| .9579          | 68 1997            | 8 2498               | 08 1731            | 71 0206            | 1340             | .0421          |
| .9580          | 1.7279 3432        | .0896 5224           | .2005 8913         | . 2867 6820        | .9991 1761       | .0420          |
| .9581          | 1.7290 5082        | 4 7940               | 03 6065            | 64 3392            | 2181             | .0419          |
| .9582          | 1.7301 6948        | 3 0643               | .2001 3186         | 60 9921            | 2600             | .0418          |
| .9583          | 12 9030            | .0891 3336           | .1999 0275         | 57 6408            | 3018             | .0417          |
| .9584          | 24 1331            | .0889 6018           | 96 7333            | 54 2852            | 3435             | .0416          |
| .9585<br>.9586 | 35 3850<br>46 6590 | 7 8688<br>6 1347     | 94 4360<br>92 1355 | 50 9253<br>47 5611 | 3850<br>4265     | .0415          |
| ł i            |                    | ł                    | l                  | i                  | l                | 1              |
| .9587<br>.9588 | 57 9550<br>69 2733 | 4 3995<br>2 6631     | 89 8319<br>87 5251 | 44 1925<br>40 8196 | 4679<br>5092     | .0413<br>.0412 |
| .9589          | 80 6138            | .0880 9256           | 85 2151            | 37 4423            | 5504             | .0411          |
| .9590          | 1.7391 9767        | .0879 1870           | .1982 9019         | .2834 0607         | .9991 5915       | .0410          |
| .9591          | 1.7403 3621        | 7 4472               | 80 5855            | 30 6747            | 6324             | .0409          |
| .9592          | 14 7701            | 5 7063               | 78 2659            | 27 2842            | 6733             | .0408          |
| .9593          | 26 2008            | 3 9642               | 75 9431            | 23 8893            | 7141             | .0407          |
| .9594          | 37 6543            | 2 2211               | 73 6170            | 20 4900            | 7548             | .0406          |
| .9595          | 49 1308            | .0870 4767           | 71 2877            | 17 0863            | 7954             | .0405          |
| .95%           | 60 6303            | .0868 7312           | 68 9551            | 13 6780            | 8359             | .0404          |
| .9597          | 72 1529            | 6 9846               | 66 6192            | 10 2653            | 8763             | .0403          |
| .9598          | 83 6988            | 5 2368               | 64 2800            | 06 8481            | 9165             | .0402          |
| .9599          | 1.7495 2680        | 3 4878               | 61 9376            | 03 4263            | 9567             | .0401          |
| .9600          | 1.7506 8607        | .0861 7377           | . 1959 5918        | .2800 0000         | .9991 9968       | .0400          |

 $E^{-1}I = E^{1}I = .0000,0027$  .0000,0002 .0000,0003 .0000,0005 .0000,0000+ .0000,0002

E-III = EIII =0000,0000,+

.9600 .0400

| n              | x                          | z                        | √pq                   | $\sqrt{1-p^2}$        | $\sqrt{1-q^2}$     | a              |
|----------------|----------------------------|--------------------------|-----------------------|-----------------------|--------------------|----------------|
| 9600           | 1.7506 8607                | .0861 7377               | .1959 5918            | .2800 0000            | .9991 9968         | 9              |
| .9600          |                            |                          |                       |                       |                    | .0400          |
| .9601<br>.9602 | 18 4770<br>30 1169         | .0859 9865<br>8 2340     | 57 2427<br>54 8903    | .2796 5691<br>93 1337 | .9992 0368<br>0767 | .0399<br>.0398 |
| .9603          | 41 7807                    | 6 4805                   | 52 5345               | 89 6937               | 1164               | .0397          |
| .9604          | 53 4683                    | 4 7257                   | 50 1754               | 86 2491               | 1561               | .0396          |
| .9605          | 65 1800                    | 2 9698                   | 47 8129               | 82 7988               | 1957               | .0395          |
| .9606          | 76 9159                    | .0851 2127               | 45 4470               | 79 3460               | 2352               | .0394          |
| .9607<br>.9608 | 1.7588 6760<br>1.7600 4605 | .0849 4544<br>7 6949     | 43 0777<br>40 7050    | 75 8874<br>72 4242    | 2746<br>3138       | .0393          |
| .9609          | 12 2694                    | 5 9343                   | 38 3289               | 68 9563               | 3530               | .0391          |
| .9610          | 1.7624 1030                | .0844 1725               | .1935 9494            | .2765 4837            | .9992 3921         | .0390          |
| .9611          | 35 9613                    | 2 4095                   | 33 5664               | 62 0063               | 4311               | .0389          |
| .9612          | 47 8445                    | .0840 6453               | 31 1800               | 58 5242               | 4700               | .0388          |
| .9613          | 59 7526                    | .0838 8799               | 28 7900               | 55 0374               | 5087               | .0387          |
| .9614<br>.9615 | 71 7858<br>83 6442         | 7 1133<br>5 3455         | 26 3966<br>23 9997    | 51 5457<br>48 0493    | 5474<br>5860       | .0386<br>.0385 |
| .9616          | 1.7695 6280                | 3 5766                   | 21 5993               | 44 5481               | 6245               | .0384          |
| .9617          | 1.7707 6373                | 1 8064                   | 19 1954               | 41 0420               | 6629               | .0383          |
| .9618          | 19 6721                    | .0830 0351               | 16 7879               | 37 5310               | 7011               | .0382          |
| .9619          | 31 7327                    | .0828 2625               | 14 3769               | 34 0152               | 7393               | .0381          |
| .9620          | 1.7743 8191                | .0826 4887               | .1911 9623            | .2730 4945            | .9992 7774         | .0380          |
| .9621<br>.9622 | 55 9315<br>68 0700         | 4 7137<br>2 9375         | 09 5442<br>07 1224    | 26 9688<br>23 4383    | 8154<br>8532       | .0379          |
| .9623          | 80 2347                    | .0821 1601               | 04 6971               | 19 9028               | 8910               | .0377          |
| .9624          | 1.7792 4258                | .0819 3815               | .1902 2681            | 16 3623               | 9287               | .0376          |
| .9625          | 1.7804 6434                | 7 6016                   | .1899 8355            | 12 8168               | .9992 9663         | .0375          |
| .9626          | 16 8877                    | 5 8205                   | 97 3993               | 09 2663               | .9993 0038         | .0374          |
| .9627          | 29 1587<br>41 4566         | 4 0382<br>2 2547         | 94 9594<br>92 5158    | 05 7108<br>.2702 1503 | 0411<br>0784       | .0373          |
| .9628<br>.9629 | 53 7816                    | .0810 4700               | 90 0685               | .2698 5846            | 1156               | .0372          |
| .9630          | 1.7866 1337                | .0808 6840               | .1887 6175            | .2695 0139            | .9993 1527         | .0370          |
| .9631          | 78 5132                    | 6 8967                   | 85 1629               | 91 4381               | 1896               | .0369          |
| .9632          | 1.7890 9201                | 5 1083<br>3 3185         | 82 7044               | 87 8571               | 2265               | .0368          |
| .9633          | 1.7903 3546                |                          | 80 2423               | 84 2710               | 2633               | .0367          |
| .9634<br>.9635 | 15 8169<br>28 3070         | .0801 5276<br>.0799 7354 | 77 7763<br>75 3066    | 80 6798<br>77 0833    | 3000<br>3365       | .0366<br>.0365 |
| .9636          | 40 8252                    | 7 9419                   | 72 8331               | 73 4816               | 3730               | .0364          |
| .9637          | 53 3715                    | 6 1472                   | 70 3558               | 69 8747               | 4094               | .0363          |
| .9638          | 65 9462                    | 4 3512                   | 67 8747               | 66 2626               | 4457               | .0362          |
| .9639          | 78 5493<br>1.7991 1811     | 2 5540<br>.0790 7555     | 65 3898<br>.1862 9010 | .2659 0224            | .9993 5179         | .0361          |
| .9641          | 1.8003 8416                | .0788 9558               | 60 4083               | 55 3943               | 5539               | .0359          |
| .9642          | 16 5311                    | 7 1548                   | 57 9117               | 51 7609               | 5897               | .0358          |
| .9643          | 29 2496                    | 5 3525                   | 55 4113               | 48 1222               | 6255               | .0357          |
| .9644          | 41 9974                    | 3 5489                   | 52 9069               | 44 4780               | 6612               | .0356          |
| .9645          | 54 7746<br>67 5813         | .0781 7441<br>.0779 9380 | 50 3986<br>47 8864    | 40 8285<br>37 1735    | 6968<br>7322       | .0355          |
| .9647          | 80 4177                    | 8 1306                   | 45 3702               | 33 5131               | 7676               | .0353          |
| .9648          | 1.8093 2839                | 6 3219                   | 42 8500               | 29 8471               | 8029               | .0352          |
| .9649          | 1.8106 1802                | 4 5119                   | 40 3258               | 26 1757               | 8381               | .0351          |
| .9650          | 1.8119 1067                | .0772 7006               | .1837 7976            | .2622 4988            | .9993 8731         | .0350          |

 $E^{-1}I = E^{1}I = .0000,0033$  .0000,0002 .0000,0004 .0000,0006 .0000,0000+ .0000,0003

E-III = EIII =00000000+

.9650 .0350

| .9650          |                            | _                        | 1                     | <b>1</b> 2            | 4 9                | .0350          |
|----------------|----------------------------|--------------------------|-----------------------|-----------------------|--------------------|----------------|
| _ <b>p</b>     | x                          | Z                        | √pq                   | $\sqrt{1-p^2}$        | $\sqrt{1-q^2}$     | q              |
| .9650          | 1.8119 1067                | .0772 7006               | .1837 7976            | .2622 4988            | .9993 8731         | .0350          |
| .9651          | 32 0635                    | .0770 8881               | 35 2654               | 18 8163               | 9081               | .0349          |
| .9652<br>.9653 | 45 0509<br>58 0689         | .0769 0742<br>7 2591     | 32 7291<br>30 1888    | 15 1283<br>11 4347    | 9430<br>.9993 9777 | .0348          |
| .9654          | 71 1177                    | 5 4426                   | 27 6444               | 07 7354               | .9994 0124         | .0346          |
| .9655          | 84 1976                    | 3 6248                   | 25 0959               | 04 0305               | 0470               | .0345          |
| .9656          | 1.8197 3087                | .0761 8058               | 22 5433               | .2600 3200            | 0814               | .0344          |
| .9657          | 1.8210 4511                | .0759 9854               | 19 9865               | .2596 6037            | 1158               | .0343          |
| .9658<br>.9659 | 23 6250<br>36 8307         | 8 1637<br>6 3407         | 17 4257<br>14 8606    | 92 8818<br>89 1541    | 1501<br>1843       | .0342<br>.0341 |
| .9660          | 1.8250 0682                | .0754 5163               | .1812 2914            | .2585 4207            | .9994 2183         | .0340          |
| .9661          | 63 3378                    | 2 6906                   | 09 7179               | 81 6814               |                    |                |
| .9662          | 76 6396                    | .0750 8636               | 07 1403               | 77 9364               | 2523<br>2862       | .0339          |
| .9663          | 1.8289 9738                | .0749 0353               | 04 5584               | 74 1855               | 3199               | .0337          |
| .9664          | 1.8303 3407                | 7 2056                   | .1801 9723            | 70 4288               | 3536               | .0336          |
| .9665<br>.9666 | 16 7403<br>30 1729         | 5 3746<br>3 5423         | .1799 3818<br>96 7871 | 66 6661<br>62 8976    | 3872<br>4206       | .0335          |
|                | 1                          |                          | ł .                   |                       |                    | 1              |
| .9667<br>.9668 | 43 6386<br>57 1377         | .0741 7086<br>.0739 8736 | 94 1881<br>91 5848    | 59 1231<br>55 3426    | 4540<br>4873       | .0333          |
| .9669          | 70 6704                    | 8 0372                   | 88 9771               | 51 5562               | 5204               | .0331          |
| .9670          | 1.8384 2367                | .0736 1994               | .1786 3650            | .2547 7637            | .9994 5535         | .0330          |
| .9671          | 1.8397 8370                | 4 3603                   | 83 7486               | 43 9652               | 5856               | .0329          |
| .9672<br>.9673 | 1.8411 4713<br>25 1400     | 2 5199<br>.0730 6780     | 81 1277<br>78 5025    | 40 1606<br>36 3499    | 6194               | .0328          |
|                | 1                          |                          |                       |                       | 6521               | .0327          |
| .9674<br>.9675 | 38 8433<br>52 5812         | .0728 8348<br>6 9903     | 75 8727<br>73 2386    | 32 5331<br>28 7101    | 6848<br>7174       | .0326<br>.0325 |
| .9676          | 66 3540                    | 5 1443                   | 70 5999               | 24 8810               | 7498               | .0324          |
| .9677          | 80 1620                    | 3 2970                   | 67 9567               | 21 0456               | 7822               | .0323          |
| .9678<br>.9679 | 1.8494 0052<br>1.8507 8840 | .0721 4483<br>.0719 5982 | 65 3090<br>62 6568    | 17 2040<br>13 3561    | 8145               | .0322          |
| .9680          | 1.8521 7986                | .0717 7467               | .1760 0000            | .2509 5019            | .9994 8787         | .0320          |
|                |                            |                          |                       |                       |                    |                |
| .9681<br>.9682 | 35 7491<br>49 7358         | 5 8938<br>4 0396         | 57 3386<br>54 6726    | 05 6414<br>.2501 7746 | 9107<br>9425       | .0319<br>.0318 |
| .9683          | 63 7588                    | 2 1839                   | 52 0020               | .2497 9013            | .9994 9743         | .0317          |
| .9684          | 77 8185                    | .0710 3268               | 49 3267               | 94 0217               | .9995 0060         | .0316          |
| .9685<br>.9686 | 1.8591 9149<br>1.8606 0485 | .0708 4683<br>6 6084     | 46 6468<br>43 9622    | 90 1355<br>86 2429    | 0375<br>0690       | .0315          |
|                | ł                          |                          |                       | i                     |                    |                |
| .9687<br>.9688 | 20 2192<br>34 4275         | 4 7471<br>2 8844         | 41 2728<br>38 5787    | 82 3439<br>78 4382    | 1003<br>1316       | .0313          |
| .9689          | 48 6735                    | .0701 0202               | 35 8799               | 74 5260               | 1628               | .0311          |
| .9690          | 1.8662 9574                | .0699 1546               | .1733 1763            | .2470 6072            | .9995 1938         | .0310          |
| .9691          | 77 2795                    | 7 2876                   | 30 4679               | 66 6818               | 2248               | .0309          |
| .9692<br>.9693 | 1.8691 6400<br>1.8706 0392 | 5 4192<br>3 5493         | 27 7546<br>25 0365    | 62 7497<br>58 8109    | 2557<br>2864       | .0308          |
|                |                            |                          | j                     | }                     |                    | 1              |
| .9694<br>.9695 | 20 4773<br>34 9545         | .0691 6780<br>.0689 8052 | 22 3136<br>19 5857    | 54 8654<br>50 9131    | 3171<br>3477       | .0306          |
| .9696          | 49 4711                    | 7 9310                   | 16 8529               | 46 9540               | 3781               | .0304          |
| .9697          | 64 0273                    | 6 0553                   | 14 1152               | 42 9881               | 4085               | .0303          |
| .9698<br>.9699 | 78 6234<br>1.8793 2596     | 4 1782<br>2 2996         | 11 3725<br>08 6249    | 39 0154<br>35 0357    | 4388<br>4689       | .0302          |
|                | <u></u>                    |                          |                       |                       |                    | .              |
| .9700          | 1.8807 9361                | .0680 4195               | 1705 8722             | .2431 0492            | .9995 4990         | .0300          |

 $E^{-1}$   $E^{1}$   $E^{$ 

E-III = EIII =00000000+

.9700 .0300

| .9700          |                            |                          |                    |                    |                  | .0300          |
|----------------|----------------------------|--------------------------|--------------------|--------------------|------------------|----------------|
| p              | x                          | Z                        | √pq                | $\sqrt{1-p^2}$     | $\sqrt{1-q^2}$   | q              |
| .9700          | 1.8807 9361                | .0680 4195               | .1705 8722         | .2431 0492         | .9995 4990       | .0300          |
| .9701          | 1.8822 6533                | 78 5380                  | 03 1145            | 27 0556            | 5290             | .0299          |
| .9702          | 1.8837 4113                | 76 6550                  | .1700 3517         | 23 0551            | 5588             | .0298          |
| .9703          | 1.8852 2105                | 74 7705                  | . 1697 5839        | 19 0475            | 5886             | .0297          |
| .9704          | 1.8867 0511                | 72 8845                  | 94 8109            | 15 0329            | 6182             | .0296          |
| .9705          | 1.8881 9334                | 70 9971                  | 92 0328            | 11 0112            | 6478             | .0295          |
| .9706          | 1.8896 8576                | 69 1082                  | 89 2495            | 06 9823            | 6773             | .0294          |
| .9707          | 1.8911 8240                | 67 2177                  | 86 4611            | .2402 9463         | 7066             | .0293          |
| .9708          | 1.8926 8329                | 65 3258                  | 83 6674            | .2398 9031         | 7359             | .0292          |
| .9709          | 1.8941 8845                | 63 4323                  | 80 8685            | 94 8526            | 7651             | .0291          |
| .9710          | 1.8956 9792                | .0661 5374               | .1678 0644         | .2390 7948         | .9995 7941       | .0290          |
| .9711          | 1.8972 1172                | 59 6410                  | 75 2549            | 86 7298            | 8231             | .0289          |
| .9712          | 1.8987 2988                | 57 7430                  | 72 4401            | 82 6573            | 8519             | .0288          |
| .9713          | 1.9002 5243                | 55 8435                  | 69 6200            | 78 5775            | 8807             | .0287          |
| .9714          | 1.9017 7940                | 53 9425                  | 66 7945            | 74 4903            | 9094             | .0286          |
| .9715          | 1.9033 1082                | 52 0399<br>50 1358       | 63 9636            | 70 3955            | 9379             | .0285          |
| .9716          | 1.9048 4671                | 50 1358                  | 61 1273            | 66 2933            | 9664             | .0284          |
| .9717          | 1.9063 8711                | 48 2302                  | 58 2856            | 62 1835            | .9995 9947       | .0283          |
| .9718          | 1.9079 3204<br>1.9094 8155 | 46 3231                  | 55 4383            | 58 0662<br>53 9412 | .9996 0230       | .0282          |
| .9719          |                            | 44 4144                  | 52 5855            |                    | 0512             | .0281          |
| .9720          | 1.9110 3565                | .0642 5041               | .1649 7273         | .2349 8085         | .9996 0792       | .0280          |
| .9721          | 1.9125 9438                | 40 5923                  | 46 8634            | 45 6681            | 1072             | .0279          |
| .9722<br>.9723 | 1.9141 5777<br>1.9157 2585 | 38 6789<br>36 7640       | 43 9939<br>41 1188 | 41 5200<br>37 3641 | 1351<br>1628     | .0278<br>.0277 |
|                |                            |                          | l                  |                    |                  |                |
| .9724          | 1.9172 9866                | 34 8475<br>32 9294       | 38 2381<br>35 3516 | 33 2004<br>29 0288 | 1905<br>2180     | .0276          |
| .9726          | 1.9188 7623<br>1.9204 5858 | 31 0097                  | 32 4595            | 24 8492            | 2455             | .0275<br>.0274 |
|                |                            |                          | į                  |                    |                  |                |
| .9727<br>.9728 | 1.9220 4576<br>1.9236 3779 | 29 0885<br>27 1656       | 29 5616<br>26 6579 | 20 6618<br>16 4663 | 2729<br>3001     | .0273<br>.0272 |
| .9729          | 1.9252 3472                | 25 2412                  | 23 7484            | 12 2627            | 3273             | .0271          |
| .9730          | 1.9268 3657                | .0623 3151               | .1620 8331         | .2308 0511         | .9996 3543       | .0270          |
| .9731          | 1.9284 4338                | 21 3875                  | 17 9119            | .2303 8314         | 3813             | .0269          |
| .9732          | 1.9300 5518                | 19 4583                  | 14 9848            | .2299 6034         | 4082             | .0268          |
| .9733          | 1.9316 7202                | 17 5274                  | 12 0518            | 95 3673            | 4349             | .0267          |
| .9734          | 1.9332 9392                | 15 5949                  | 09 1128            | 91 1229            | 4616             | .0266          |
| .9735          | 1.9349 2093                | 13 6608                  | 06 1678            | 86 8701            | 4881             | .0265          |
| .9736          | 1.9365 5307                | 11 7251                  | 03 2168            | 82 6090            | 5146             | .0264          |
| .9737          | 1.9381 9038                | 09 7877                  | .1600 2597         | 78 3395            | 5410             | .0263          |
| .9738          | 1.9398 3290                | 07 8487                  | .1597 2965         | 74 0616            | 5672             | .0262          |
| .9739          | 1.9414 8068                | 05 9080                  | 94 3271            | 69 7751            | 5934             | .0261          |
| .9740          | 1.9431 3375                | .0603 9657               | .1591 3516         | .2265 4801         | .9996 6194       | .0260          |
| .9741          | 1.9447 9214                | 02 0218                  | 88 3699            | 61 1765            | 6454             | .0259          |
| .9742          | 1.9464 5590<br>1.9481 2506 | .0600 0761<br>.0598 1288 | 85 3820<br>82 3878 | 56 8642<br>52 5432 | 6712<br>6970     | .0258<br>.0257 |
| 1              | 1                          |                          | 1                  |                    | 1                |                |
| .9744          | 1.9497 9968<br>1.9514 7977 | 96 1799<br>94 2292       | 79 3872<br>76 3803 | 48 2135<br>43 8750 | 7227<br>7482     | .0256<br>.0255 |
| .9746          | 1.9531 6540                | 92 2769                  | 73 3671            | 39 5276            | 7737             | .0254          |
| .9747          | 1.9548 5658                | 90 3229                  | 70 3474            | 35 1714            | 7990             | 1              |
| .9748          | 1.9565 5338                | 88 3672                  | 67 3213            | 30 8061            | 8243             | .0253<br>.0252 |
| .9749          | 1.9582 5583                | 86 4098                  | 64 2887            | 26 4319            | 8495             | .0251          |
| .9750          | 1.9599 6398                | .0584 4507               | .1561 2495         | .2222 0486         | .9996 8745       | .0250          |
| -"             | 11                         | 1 .0201 7201             | 1 11701 2177       | , 0100             | 1 . / / / 01 7 / |                |

E<sup>-1</sup>i= ε<sup>1</sup>i=.0000,0060 .0000,0002 .0000,0007 .0000,0010 .0000,0000+

E-111 = E111 =000000000+

.9750 .0250

| p                | x                          | z                  | √pq                | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$           | q      |
|------------------|----------------------------|--------------------|--------------------|--------------------------|--------------------------|--------|
| .9750            | 1.9599 6398                | .0584 4507         | .1561 2495         | .2222 0486               | .9996 8745               | .0250  |
| .9751            | 1.9616 7787                | 82 4899            | 58 2038            | 17 6562                  | 8995                     | .0249  |
| .9752            | 1.9633 9753                | 80 5273            | 55 1514            | 13 2546                  | 9243                     | .0248  |
| .9753            | 1.9651 2302                | 78 5631            | 52 0925            | 08 8438                  | 9491                     | .0247  |
| .9754            | 1.9668 5439                | 76 5971            | 49 0268            | .2204 4237               | 9737                     | .0246  |
| .9755  <br>.9756 | 1.9685 9167<br>1.9703 3491 | 74 6294<br>72 6599 | 45 9544<br>42 8752 | .2199 9943<br>95 5555    | .9996 9983<br>.9997 0228 | .0245  |
|                  | i                          |                    |                    |                          |                          |        |
| .9757<br>.9758   | 1.9720 8416<br>1.9738 3946 | 70 6887<br>68 7157 | 39 7893<br>36 6965 | 91 1073<br>86 6495       | 0471<br>0714             | .0243  |
| .9759            | 1.9756 0087                | 66 7410            | 33 5968            | 82 1822                  | 0955                     | .0241  |
| .9760            | 1.9773 6843                | .0564 7645         | .1530 4901         | .2177 7052               | .9997 1196               | .0240  |
| .9761            | 1.9791 4219                | 62 7863            | 27 3765            | 73 2186                  | 1435                     | .0239  |
| .9762            | 1.9809 2219                | 60 8062            | 24 2559            | 68 7222                  | 1674                     | .0238  |
| .9763            | 1.9827 0850                | 58 8244            | 20 1282            | 64 2160                  | 1912                     | .0237  |
| .9764            | 1.9845 0115                | 56 8408            | 17 9934            | 59 7000                  | 2148                     | .0236  |
| .9765<br>.9766   | 1.9863 0021<br>1.9881 0571 | 54 8554<br>52 8682 | 14 8515<br>11 7024 | 55 1740<br>50 6380       | 2384<br>2618             | .0235  |
| 1                |                            |                    |                    |                          |                          | l      |
| .9767<br>.9768   | 1.9899 1772<br>1.9917 3629 | 50 8792<br>48 8884 | 08 5460<br>05 3823 | 46 0920<br>41 5359       | 2852<br>3084             | .0233  |
| .9769            | 1.9935 6147                | 46 8957            | .1502 2114         | 36 9696                  | 3316                     | .0231  |
| .9770            | 1.9953 9331                | .0544 9013         | .1499 0330         | .2132 3930               | .9997 3547               | .0230  |
| .9771            | 1.9972 3187                | 42 9049            | 95 8473            | 27 8061                  | 3776                     | .0229  |
| .9772            | 1.9990 7721                | 40 9068            | 92 6540            | 23 2089                  | 4005                     | .0228  |
| .9773            | 2.0009 2939                | 38 9068            | 89 4533            | 18 6012                  | 4232                     | .0227  |
| .9774            | 2.0027 8845                | 36 9049            | 86 2449            | 13 9830                  | 4459                     | .0226  |
| .9775<br>.9776   | 2.0046 5446<br>2.0065 2748 | 34 9012<br>32 8956 | 83 0290<br>79 8054 | 09 3542<br>04 7147       | 4684<br>4909             | .0225  |
| ]                |                            |                    | 1                  | 1                        |                          | 1      |
| .9777<br>.9778   | 2.0084 0756<br>2.0102 9477 | 30 8882<br>28 8788 | 76 5741<br>73 3350 | .2100 0645<br>.2095 4035 | 5132<br>5355             | .0223  |
| .9779            | 2.0121 8917                | 26 8676            | 70 0881            | 90 7317                  | 5577                     | .0221  |
| .9780            | 2.0140 9081                | .0524 8544         | .1466 8333         | .2086 0489               | .9997 5797               | . 0220 |
| .9781            | 2.0159 9977                | 22 8394            | 63 5706            | 81 3551                  | 6017                     | .0219  |
| .9782            | 2.0179 1610                | 20 8224            | 60 3000            | 76 6502                  | 6235                     | .0218  |
| .9783            | 2.0198 3987                | 18 8035            | 57 0213            | 71 9341                  | 6453                     | .0217  |
| .9784            | 2.0217 7115                | 16 7827            | 53 7345            | 67 2068                  | 6669                     | .0216  |
| .9785<br>.9786   | 2.0237 0999<br>2.0256 5648 | 14 7600<br>12 7353 | 50 4396<br>47 1365 | 62 4682<br>57 7182       | 6885<br>7099             | .0215  |
|                  |                            |                    | i                  | i                        |                          | 1      |
| .9787<br>.9788   | 2.0276 1066<br>2.0295 7262 | 10 7087<br>08 6801 | 43 8251<br>40 5055 | 52 9566<br>48 1836       | 7313<br>7525             | .0213  |
| .9789            | 2.0315 4243                | 06 6495            | 37 1774            | 43 3989                  | 7737                     | .0211  |
| .9790            | 2.0335 2015                | .0504 6170         | .1433 8410         | .2038 6025               | .9997 7948               | .0210  |
| .9791            | 2.0355 0586                | 02 5825            | 30 4961            | 33 7942                  | 8157                     | .0209  |
| .9792            | 2.0374 9962                | .0500 5460         | 27 1426            | 28 9741                  | 8366                     | .0208  |
| .9793            | 2.0395 0152                | .0498 5075         | 23 7805            | 24 1420                  | 8573                     | .0207  |
| .9794            | 2.0415 1162                | 96 4670            | 20 4098            | 19 2979                  | 8780                     | .0206  |
| .9795<br>.9796   | 2.0435 3001<br>2.0455 5676 | 94 4245<br>92 3799 | 17 0303<br>13 6421 | 14 4416<br>09 5731       | 8985<br>9190             | .0205  |
| .9797            | 2.0475 9194                | 90 3334            | 10 2450            | .2004 6922               | 9393                     | .0203  |
| .9798            | 2.0496 3564                | 88 2847            | 06 8390            | .1999 7990               | 9596                     | .0203  |
| .9799            | 2.0516 8794                | 86 2341            | 03 4240            | 94 8932                  | 9797                     | .0201  |
|                  | 2.0537 4891                | .0484 1814         | .1400 0000         | .1989 9749               | .9997 9998               | .0200  |

E<sup>-1</sup>1 ε<sup>1</sup>1=.0000,0088 .0000,0002 .0000,0010 .0000,0013 .0000,0000+

TABLE I

.9800 .0200

| p              | x                          | z                  | √pq                | $\sqrt{1-p^2}$     | $\sqrt{1-q^2}$ | q              |
|----------------|----------------------------|--------------------|--------------------|--------------------|----------------|----------------|
| .9800          | 2.0537 4891                | .0484 1814         | .1400 0000         | .1989 9749         | .9997 9998     | .0200          |
| .9801          | 2.0558 1865                | 82 1266            | .1396 5669         | 85 0438            | .9998 0198     | .0199          |
| .9802          | 2.0578 9723                | 80 0697            | 93 1245            | 80 1000            | 0396           | .0198          |
| .9803          | 2.0599 8474                | 78 0108            | 89 6730            | 75 1433            | 0594 -         | .0197          |
| .9804          | 2.0620 8126                | 75 94 <b>97</b>    | 86 2121            | 70 1736            | 0790           | .0196          |
| .9805          | 2.0641 8689                | 73 8866            | 82 7418            | 65 1908            | 0986           | .0195          |
| .9806          | 2.0663 0171                | 71 8214            | 79 2621            | 60 1949            | 1180           | .0194          |
| .9807<br>.9808 | 2.0684 2581<br>2.0705 5929 | 69 7540<br>67 6845 | 75 7729<br>72 2740 | 55 1857<br>50 1631 | 1374<br>1566   | .0193          |
| .9809          | 2.0727 0223                | 65 6129            | 68 7655            | 45 1270            | 1758           | .0191          |
| .9810          | 2.0748 5473                | .0463 5391         | .1365 2472         | .1940 0773         | .9998 1948     | .0190          |
|                |                            |                    |                    |                    |                |                |
| .9811          | 2.0770 1689<br>2.0791 8881 | 61 4632<br>59 3851 | 61 7191<br>58 1811 | 35 0140<br>29 9368 | 2138<br>2316   | .0189<br>.0188 |
| .9813          | 2.0813 7057                | 57 3048            | 54 6332            | 24 8457            | 2514           | .0187          |
| .9814          | 2.0835 6229                | 55 2223            | 51 0751            | 19 7406            | 2701           | .0186          |
| .9815          | 2.0857 6407                | 53 1377            | 47 5070            | 14 6214            | 2886           | .0185          |
| .9816          | 2.0879 7600                | 51 0508            | 43 9286            | 09 4879            | 3071           | .0184          |
| .9817          | 2.0901 9819                | 48 9617            | 40 3399            | .1904 3400         | 3254           | .0183          |
| .9818          | 2.0924 3076                | 46 8704            | 36 7408            | .1899 1777         | 3437           | .0182          |
| .9819          | 2.0946 7380                | 44 7768            | 33 1313            | 94 0008            | 3618           | .0181          |
| .9820          | 2.0969 2743                | .0442 6810         | .1329 5112         | .1888 8091         | .9998 3799     | .0180          |
| .9821          | 2.0991 9176                | 40 5830            | 25 8805            | 83 6027            | 3978           | .0179          |
| .9822<br>.9823 | 2.1014 6691<br>2.1037 5299 | 38 4827<br>36 3800 | 22 2390<br>18 5867 | 78 3812<br>73 1447 | 4157<br>4334   | .0178<br>.0177 |
| ł              |                            |                    | 1                  |                    |                | ł              |
| .9824<br>.9825 | 2.1060 5012<br>2.1083 5841 | 34 2751<br>32 1679 | 14 9236<br>11 2494 | 67 8929<br>62 6258 | 4511<br>4686   | .0176<br>.0175 |
| .9826          | 2.1106 7799                | 30 0584            | 07 5641            | 57 3433            | 4861           | .0174          |
| .9827          | 2.1130 0898                | 27 9466            | 03 8677            | 52 0451            | 5034           | .0173          |
| .9828          | 2.1153 5151                | 25 8342            | .1300 1600         | 46 7312            | 5207           | .0172          |
| .9829          | 2.1177 0570                | 23 7159            | .1296 4409         | 41 4014            | 5378           | .0171          |
| .9830          | 2.1200 7169                | .0421 5970         | .1292 7103         | .1836 0556         | .9998 5549     | .0170          |
| .9831          | 2.1224 4961                | 19 4757            | 88 9682            | 30 6936            | 5718           | .0169          |
| .9832          | 2.1248 3959                | 17 3521            | 85 2144            | 25 3153            | 5887           | .0168          |
| .9833          | 2.1272 4177                | 15 2260            | 81 4488            | 19 9206            | 6055           | .0167          |
| .9834<br>.9835 | 2.1296 5629<br>2.1320 8329 | 13 0976            | 77 6713            | 14 5093<br>09 0813 | 6221<br>6387   | .0166<br>.0165 |
| .9836          | 2.1345 2291                | 10 9667<br>08 8334 | 73 8819<br>70 0803 | .1803 6363         | 6551           | .0164          |
| .9837          | 2.1369 7531                | 06 6977            | 66 2666            | .1798 1744         | 6715           | .0163          |
| .9838          | 2.1394 4063                | 04 5595            | 62 4405            | 92 6952            | 6877           | .0162          |
| .9839          | 2.1419 1901                | 02 4188            | 58 6020            | 87 1986            | 7039           | .0161          |
| .9840          | 2.1444 1062                | .0400 2756         | .1254 7510         | .1781 6846         | .9998 7199     | .0160          |
| .9841          | 2.1469 1562                | .0398 1300         | 50 8873            | 76 1529            | 7359           | .0159          |
| .9842          | 2.1494 3416                | 95 9818            | 47 0108            | 70 6033            | 7517           | .0158          |
| .9843          | 2.1519 6641                | 93 8311            | 43 1215            | 65 0357            | 7675           | .0157          |
| .9844          | 2.1545 1253                | 91 6779            | 39 2191            | 59 4499            | 7831           | .0156          |
| .9845<br>.9846 | 2.1570 7270<br>2.1596 4709 | 89 5221<br>87 3637 | 35 3036<br>31 3748 | 53 8458<br>48 2231 | 7987<br>8141   | .0155          |
|                |                            |                    | l .                | i .                | 1              | l              |
| .9847<br>.9848 | 2.1622 3587<br>2.1648 3922 | 85 2028<br>83 0392 | 27 4327<br>23 4770 | 42 5817<br>36 9214 | 8295<br>8447   | .0153          |
| .9849          | 2.1674 5733                | 80 8731            | 19 5077            | 31 2420            | 8599           | .0151          |
| .9850          | 2.1700 9038                | .0378 7043         | .1215 5246         | .1725 5434         | .9998 8749     | .0150          |

 $E^{-ii} = E^{ii} = .0000,014$  .0000,0003 .0000,0014 .0000,0020 .0000,0000+ 0000,00007

E-111 = E11 =00000001

| P              | x                          | z                  | √pq                      | $\sqrt{1-p^2}$        | $\sqrt{1-q^2}$     | q              |
|----------------|----------------------------|--------------------|--------------------------|-----------------------|--------------------|----------------|
| .9850          | 2.1700 9038                | .0378 7043         | .1215 5246               | .1725 5434            | .9998 8749         | .0150          |
| .9851          | 2.1727 3856                | 76 5329            | 11 5275                  | 19 8253               | 8899               | .0149          |
| .9852<br>.9853 | 2.1754 0207<br>2.1780 8110 | 74 3588<br>72 1821 | 07 5165<br>.1203 4912    | 14 0875<br>08 3299    | 9047<br>9195       | .0148<br>.0147 |
| .9854          | 2.1807 7585                | 70 0027            | .1199 4515               | .1702 5522            | 9341               | .0146          |
| .9855          | 2.1834 8653                | 67 8205            | 95 3974                  | .1696 7543            | 9487               | .0145          |
| .9856          | 2.1862 1335                | 65 6357            | 91 3287                  | 90 9358               | 9631               | .0144          |
| .9857<br>.9858 | 2.1889 5653<br>2.1917 1628 | 63 4481            | 87 2451                  | 85 0967<br>79 2367    | 9775<br>.9998 9917 | .0143          |
| .9859          | 2.1944 9282                | 61 2578<br>59 0647 | 83 1467<br>79 0331       | 73 3556               | .9999 0059         | .0142<br>.0141 |
| .9860          | 2.1972 8638                | .0356 8688         | .1174 9043               | .1667 4531            | .9999 0200         | .0140          |
| .9861          | 2.2000 9720                | 54 6701            | 70 7600                  | 61 5291               | 0339               | .0139          |
| .9862<br>.9863 | 2.2029 2550<br>2.2057 7154 | 52 4686<br>50 2642 | 66 6002<br>62 4246       | 55 5833<br>49 6154    | 0478<br>0615       | .0138<br>.0137 |
| .9864          | 2.2086 3556                | 48 0570            | 58 2331                  | 43 6253               | 0752               | .0136          |
| .9865          | 2.2115 1781                | 45 8469            | 54 0256                  | 37 6126               | 0887               | .0135          |
| .9866          | 2.2144 1855                | 43 6340            | 49 8017                  | 31 5772               | 1022               | .0134          |
| .9867          | 2.2173 3805                | 41 4181            | 45 5614<br>41 3045       | 25 5187<br>19 4369    | 1155<br>1288       | .0133          |
| .9868<br>.9869 | 2.2202 7656<br>2.2232 3438 | 39 1993<br>36 9775 | 37 0308                  | 13 3316               | 1419               | .0131          |
| .9870          | 2.2262 1177                | .0334 7528         | .1132 7400               | .1607 2025            | .9999 1550         | .0130          |
| .9871          | 2.2292 0903                | 32 5251            | 28 4321                  | .1601 0493            | 1679               | .0129          |
| .9872          | 2.2322 2645<br>2.2352 6433 | 30 2944<br>28 0607 | 24 1068<br>19 7638       | .1594 8718<br>88 6696 | 1808<br>1935       | .0128<br>.0127 |
| .9874          | 2.2383 2298                | 25 8239            | 15 4031                  | 82 4424               | 2062               | .0126          |
| .9875          | 2.2414 0272                | 23 5840            | 11 0243                  | 76 1900               | 2187               | .0125          |
| .9876          | 2.2445 0387                | <b>21</b> 3410     | 06 6273                  | 69 9121               | 2312               | .0124          |
| .9877          | 2.2476 2676<br>2.2507 7171 | 19 0950<br>16 8458 | .1102 2119<br>.1097 7778 | 63 6083<br>57 2784    | 2435<br>2558       | .0123<br>.0122 |
| .9879          | 2.2539 3909                | 14 5934            | 93 3247                  | 50 9220               | 2679               | .0121          |
| .9880          | 2.2571 2924                | .0312 3379         | .1088 8526               | .1544 5388            | .9999 2800         | .0120          |
| .9881          | 2.2603 4254                | 10 0792            | 84 3611                  | 38 1284               | 2919               | .0119          |
| .9882          | 2.2635 7934<br>2.2668 4003 | 07 8172<br>05 5520 | 79 8500<br>75 3190       | 31 6906<br>25 2249    | 3038<br>3155       | .0118<br>.0117 |
| .9884          | 2.2701 2500                | 03 2835            | 70 7679                  | 18 7310               | 3272               | .0116          |
| .9885          | 2.2734 3465                | .0301 0117         | 66 1965                  | 12 2086               | 3387               | .0115          |
| .9886          | 2.2767 6940                | .0298 7366         | 61 6044                  | .1505 6573            | 3502               | .0114          |
| .9887<br>.9888 | 2.2801 2965<br>2.2835 1586 | 96 4582<br>94 1764 | 56 9915<br>52 3574       | .1499 0767<br>92 4664 | 3615<br>3728       | .0113<br>.0112 |
| .9889          | 2.2869 2845                | 91 8912            | 47 7018                  | 85 8260               | 3839               | .0111          |
| .9890          | 2.2903 6788                | .0289 6025         | .1043 0244               | .1479 1552            | .9999 3950         | .0110          |
| .9891          | 2.2938 3462                | 87 3104            | 38 3251                  | 72 4534               | 4059               | .0109          |
| .9892          | 2.2973 2915<br>2.3008 5197 | 85 0148<br>82 7157 | 33 6034<br>28 8591       | 65 7203<br>58 9554    | 4168<br>4275       | .0108<br>.0107 |
| .9894          | 2.3044 0357                | 80 4131            | 24 0918                  | 52 1584               | 4382               | .0106          |
| .9895          | 2.3079 8448                | <b>78</b> 1069     | 19 3012                  | 45 3287               | 4487               | .0105          |
| .9896          | 2.3115 9523                | 75 7971            | 14 4871                  | 38 4658               | 4592               | .0104          |
| .9897          | 2.3152 3637<br>2.3189 0847 | 73 4837<br>71 1667 | 09 6489<br>.1004 7865    | 31 5694<br>24 6389    | 4695<br>4798       | .0103          |
| .9898          | 2.3226 1210                | 68 8459            | .0999 8995               | 17 6738               | 4899               | .0101          |
| .9900          | 2.3263 4787                | .0266 5214         | .0994 9874               | .1410 6736            | .9999 5000         | .0100          |

 $E^{-11} = E^{11} = .0000,027$  .0000,0004 .0000,0023 .0000,0032 .0000,0000+ .0000,0009

 $E^{-111} = E^{111} = 000000002$ 

.9900 .0100

|                |                              | _                  | 4                  | J = _2                     | 1 - 2                |       |
|----------------|------------------------------|--------------------|--------------------|----------------------------|----------------------|-------|
| P              | x                            | Z                  | ₹pq                | $\sqrt{1-p^2}$             | $\sqrt{1-q^2}$       | q     |
| .9900          | 2.3263 4787                  | .0266 5214         | .0994 9874         | .1410 6736                 | .9999 5000           | .0100 |
| .9901          | 2.3301 1640                  | 64 1932            | 90 0500            | .1403 6378                 | 5099                 | .0099 |
| .9902          | 2.3339 1831<br>2.3377 5425   | 61 8612<br>59 5253 | 85 0868<br>80 0975 | .1396 5658<br>89 4571      | 5198<br>5295         | .0098 |
| .9903          |                              |                    |                    |                            |                      |       |
| .9904<br>.9905 | 2.3416 2491                  | 57 1857<br>54 9421 | 75 0815            | 82 3111<br>75 1273         | 5392<br>5487         | .0096 |
| .9906          | 2.3455 3097  <br>2.3494 7315 | 54 8421<br>52 4946 | 70 0387<br>64 9684 | 67 9050                    | 5582                 | .0094 |
| .9907          | 2.3534 5218                  | 50 1431            | 59 8703            | 60 6436                    | 5675                 | .0093 |
| .9908          | 2.3574 6883                  | 47 7877            | 54 7439            | 53 3425                    | 5768                 | .0093 |
| .9909          | 2.3615 2387                  | 45 4282            | 49 5889            | 46 0011                    | 5859                 | .0091 |
| .9910          | 2.3656 1813                  | .0243 0646         | .0944 4046         | .1338 6187                 | .9999 5950           | .0090 |
| .9911          | 2.3697 5242                  | 40 6969            | 39 1906            | 31 1946                    | 6039                 | .0089 |
| .9912          | 2.3739 2762                  | 38 3251            | 33 9465            | 23 7281                    | 6128                 | .0088 |
| .9913          | 2.3781 4462                  | 35 9491            | 28 6716            | 16 2184                    | 6215                 | .0087 |
| .9914          | 2.3824 0434                  | 33 5688            | <b>23</b> 3656     | 08 6650                    | 6302                 | .0086 |
| .9915          | 2.3867 0773                  | 31 1842            | 18 0278            | .1301 0669                 | 6387                 | .0085 |
| .9916          | 2.3910 5579                  | 28 7954            | 12 6577            | .1293 4234                 | 6472                 | .0084 |
| .9917          | 2.3954 4952                  | 26 4021            | 07 2547            | 85 7336                    | 6555                 | .0083 |
| .9918          | 2.3998 8998                  | 24 0044            | .0901 8182         | 77 9969                    | 6638                 | .0082 |
| .9919          | 2.4043 7828                  | 21 6023            | .0896 3476         | 70 2122                    | 6719                 | .0081 |
| .9920          | 2.4089 1555                  | .0219 1957         | .0890 8423         | .1262 3787                 | .9999 6800           | .0080 |
| .9921          | 2.4135 0295                  | 16 7845            | 85 3016            | 54 4955                    | 6879                 | .0079 |
| .9922<br>.9923 | 2.4181 4171<br>2.4228 3310   | 14 3686<br>11 9482 | 79 7250<br>74 1115 | 46 5617<br>38 5762         | 6958<br><b>7</b> 035 | .0078 |
| .9924          | 2.4275 7843                  | 09 5230            | 68 4607            | 30 5381                    | 7112                 | .0076 |
| .9925          | 2.4323 7906                  | 07 0930            | 62 7717            | 22 4463                    | 7112                 | .0075 |
| .9926          | 2.4372 3641                  | 04 6582            | 57 0438            | 14 2998                    | 7262                 | .0074 |
| .9927          | 2.4421 5195                  | .0202 2185         | 51 2761            | .1206 0974                 | 7335                 | .0073 |
| .9928          | 2.4471 2722                  | .0199 7739         | 45 4679            | .1197 8381                 | 7408                 | .0072 |
| .9929          | 2.4521 6381                  | 97 3242            | 39 6184            | 89 5205                    | 7479                 | .0071 |
| .9930          | 2.4572 6339                  | .0194 8695         | .0833 7266         | .1181 1435                 | .9999 7550           | .0070 |
| .9931          | 2.4624 2768                  | 92 4097            | 27 7916            | 72 7058                    | 7619                 | .0069 |
| .9932          | 2.4676 5849                  | 89 9446            | 21 8126            | 64 2062                    | 7688                 | .0068 |
| .9933          | 2.4729 5771                  | 87 4743            | 15 7886            | 55 6431                    | 7755                 | .0067 |
| .9934          | 2.4783 2729                  | 84 9987            | 09 7185            | 47 0153                    | 7822                 | .0066 |
| .9935<br>.9936 | 2.4837 6929<br>2.4892 8586   | 82 5177<br>80 0311 | .0803 6013         | 38 3211<br><b>2</b> 9 5592 | 7887<br><b>79</b> 52 | .0065 |
|                |                              |                    |                    | 1                          | 1                    | Į.    |
| .9937<br>.9938 | 2.4948 7925<br>2.5005 5179   | 77 5391<br>75 0413 | 91 2212<br>84 9560 | 20 7279<br>11 8255         | 8015<br>8078         | .0063 |
| .9939          | 2.5063 0596                  | 72 5379            | 78 6394            | .1102 8504                 | 8139                 | .0061 |
| .9940          | 2.5121 4433                  | .0170 0287         | .0772 2694         | .1093 8007                 | .9999 8200           | .0060 |
| .9941          | 2.5180 6960                  | 67 5136            | 65 8453            | 84 6746                    | 8259                 | .0059 |
| .9942          | 2.5240 8463                  | 64 9925            | 59 3655            | 75 4701                    | 8318                 | .0058 |
| .9943          | 2.5301 9238                  | 62 4654            | 52 8287            | 66 1883                    | 8375                 | .0057 |
| .9944          | 2.5363 9601                  | 59 9321            | 46 2332            | 56 8179                    | 8432                 | .0056 |
| .9945          | 2.5426 9882                  | 57 3926            | 39 5776            | 47 3657                    | 8487                 | .0055 |
| .9946          | 2.5491 0428                  | 54 8467            | 32 8602            | 37 8266                    | 8542                 | .0054 |
| .9947          | 2.5556 1608                  | 52 2943            | 26 0792            | 28 1979                    | 8595                 | .0053 |
| .9948<br>.9949 | 2.5622 3808                  | 49 7354            | 19 2329            | 18 4773                    | 8648<br>8699         | .0052 |
|                | 2.5689 7437                  | 47 1698            | 12 3195            | .1008 6620                 |                      | .0051 |
| .9950          | 2.5758 2930                  | .0144 5974         | .0705 3368         | .0998 7492                 | .9999 8750           | .0050 |

ε<sup>-11</sup>= ε<sup>11</sup>=.0000,073 .0000,0006 Δ00,00015

006 .0000,0050

.0000,0069 .0000,0000+

 $E^{-111} = E^{111} = 000000009$ 

.0000,0001 .0000,0001

TABLE I

.9950 .0050

| p              | x                          | z                    | √pq                   | $\sqrt{1-p^2}$           | $\sqrt{1-q^2}$                 | q     |
|----------------|----------------------------|----------------------|-----------------------|--------------------------|--------------------------------|-------|
| .9950          | 2.5758 2930                | .0144 5974           | .0705 3368            | .0998 7492               | .9999 8750                     | .0050 |
| .9951          | 2.5828 0745                | 42 0181              | .0698 2829            | .0988 7361               | 8799                           | .0049 |
| .9952          | 2.5899 1368                | 39 4318              | 91 1556               | .0978 6194               | 8848                           | .0048 |
| .9953          | 2.5971 5316                | 36 8383              | 83 9525               | .0968 3961               | 8895                           | .0047 |
| .9954          | 2.6045 3136                | 34 2374              | 76 6713               | .0958 0626               | 8942                           | .0046 |
| .9955          | 2.6120 5414                | 31 6291              | 69 3093               | .0947 6154               | 8987                           | .0045 |
| .9956          | 2.6197 2771                | 29 0133              | 61 8640               | .0937 0507               | 9032                           | .0044 |
| .9957          | 2.6275 5871                | 26 3896              | 54 3325               | .0926 3644               | 9075                           | .0043 |
| .9958          | 2.6355 5424                | 23 7581              | 46 7117<br>38 9984    | .0915 5523<br>.0904 6099 | 9118                           | .0042 |
| .9959          | 2.6437 2189                | 21 1185              |                       |                          | 9159                           | .0041 |
| .9960          | 2.6520 6981                | .0118 4706           | .0631 1894            | .0893 5323               | .9999 9200                     | .0040 |
| .9961          | 2.6606 0674                | 15 8143              | 23 2808               | .0882 3146               | 9239                           | .0039 |
| .9962          | 2.6693 4209                | 13 1493              | 15 2690               | .0870 9512               | 9278                           | .0038 |
| .9963          | 2.6782 8601                | 10 4755              | .0607 1499            | .0859 4364               | 9315                           | .0037 |
| .9964          | 2.6874 4945                | 07 7927              | .0598 9190            | .0847 7641               | 9352                           | .0036 |
| .9965          | 2.6968 4426                | 05 1005              | 90 5718               | .0835 9276               | 9387                           | .0035 |
| .9966          | 2.7064 8331                | .0102 3989           | 82 1031               | .0823 9199               | 9422                           | .0034 |
| .9967          | 2.7163 8058                | .0099 68748          | 73 5076               | .0811 7333               | 9455                           | .0033 |
| .9968<br>.9969 | 2.7265 5132<br>2.7370 1217 | 96 96604<br>94 23428 | 64 7796<br>55 9128    | .0799 3597<br>.0786 7903 | 9488<br>9519                   | .0032 |
|                |                            |                      |                       |                          |                                |       |
| .9970          | 2.7477 8139                | .0091 49191          | .0546 9004            | .0774 0155               | .9999 9550                     | .0030 |
| .9971          | 2.7588 7903                | 88 73862             | 37 7351               | .0761 0250               | 9579                           | .0029 |
| .9972          | 2.7703 2723<br>2.7821 5045 | 85 97405             | 28 4089<br>18 9133    | .0747 8075<br>.0734 3507 | 9608<br>9635                   | .0028 |
| .9973          |                            | 83 19784             |                       |                          |                                |       |
| .9974          | 2.7943 7587                | 80 40961             | .0509 2386            | .0720 6414               | 9662                           | .0026 |
| .9975<br>.9976 | 2.8070 3377<br>2.8201 5806 | 77 60893<br>74 79541 | .0499 3746<br>89 3097 | .0706 6647<br>.0692 4045 | 9687<br>9712                   | .0025 |
|                |                            |                      | ĺ                     | 1                        |                                |       |
| .9977          | 2.8337 8687<br>2.8479 6329 | 71 96851             | 79 0313<br>68 5253    | .0677 8429<br>.0662 9600 | 9 <b>7</b> 35<br>9 <b>7</b> 58 | .0023 |
| .9978<br>.9979 | 2.8627 3626                | 69 12768<br>66 27237 | 57 7761               | .0647 7337               | 9779                           | .0022 |
| .9980          | 2.8781 6174                | .0063 40193          | .0446 7662            | .0632 1392               | .9999 9800                     | .0020 |
|                |                            |                      |                       |                          |                                |       |
| .9981<br>.9982 | 2.8943 0405<br>2.9112 3773 | 60 51576<br>57 61306 | 35 4756<br>23 8821    | .0616 1485               | 9819<br>9838                   | .0019 |
| .9983          | 2.9290 4975                | 54 69299             | .0411 9599            | .0582 8473               | 9855                           | .0017 |
| .9984          |                            | 51 75463             | .0399 6799            | .0565 4592               | 9872                           | .0016 |
| .9985          | 2.9478 4255<br>2.9677 3793 | 48 79694             | 87 0078               | .0547 5171               | 9887                           | .0015 |
| .9986          | 2.9888 8227                | 45 81874             | 73 9037               | .0528 9650               | 9902                           | .0014 |
| .9987          | 3.0114 5376                | 42 81870             | 60 3207               | .0509 7362               | 9915                           | .0013 |
| .9988          | 3.0356 7237                | 39 79529             | 46 2023               | .0489 7499               | 9928                           | .0012 |
| .9989          | 3.0618 1415                | 36 74672             | 31 4800               | .0468 9126               | 9939                           | .0011 |
| .9990          | 3.0902 3231                | .0033 67090          | .0316 0696            | .0447 1018               | .9999 9950                     | .0010 |
| .9991          | 3.1213 8915                | 30 56534             | .0299 8650            | .0424 1686               | 9959                           | .0009 |
| .9992          | 3.1559 0676                | 27 42700             | 82 7296               | .0399 9200               | 9968                           | .0008 |
| .9993          | 3.1946 5105                | 24 25212             | 64 4825               | .0374 1003               | 9975                           | .0007 |
| .9994          | 3.2388 8012                | 21 03588             | 44 8755               | .0346 3582               | 9982                           | .0006 |
| .9995          | 3.2905 2673                | 17 77190             | .0223 5509            | .0316 1882               | 9987                           | .0005 |
| .9996          | 3.3527 9478                | 14 45132             | .0199 9600            | .0282 8144               | 9992                           | .0004 |
| .9997          | 3.4316 1440                | 11 06086             | 73 1791               | .0244 9306               | 9995                           | .0003 |
| .9998          | 3.5400 8380                | 07 57842             | .0141 4072            | .0199 9900               | 9998<br>9999 9999              | .0002 |
| .9999          | 3.7190 1649                | .0003 95848          |                       |                          |                                |       |

For interpolation Errors and for continuation of this Table see page  $36\,$ 

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p     | <b>C</b> -1 | <b>c</b> ₀<br>+    | <b>c</b> <sub>1</sub> + |
|-------|-------------|--------------------|-------------------------|
| .0000 | .00000      | 1.00000            | .00000                  |
| .0001 | .00005      | 1.00000            | .00005                  |
| .0002 | .00010      | 1.00000            | .00010                  |
| .0003 | .00015      | 1.00000            | .00015                  |
| .0004 | .00020      | 1.00000            | .00020                  |
| .0005 | .00025      | 1.00000            | .00025                  |
| .0006 | .00030      | 1.00000            | .00030                  |
| .0007 | .00035      | 1.00000            | .00035                  |
| .0008 | .00040      | 1.00000            | .00040                  |
| .0009 | .00045      | 1.00000            | .00045                  |
| .0010 | .00050      | 1.00000            | .00050                  |
| .0011 | .00055      | 1.00000            | .00055                  |
| .0012 | .00060      | 1.00000            | .00060                  |
| .0013 | .00065      | 1.00000            | .00065                  |
| .0014 | .00070      | 1.00000            | .00070                  |
| .0015 | .00075      | 1.00000            | .00075                  |
| .0016 | .00080      | 1.00000            | .00080                  |
| .0017 | .00085      | 1.00000            | .00085                  |
| .0018 | .00090      | 1.00000            | .00090                  |
| .0019 | .00095      | 1.00000            | .00095                  |
| .0020 | .00100      | 1.00000            | .00100                  |
| .0021 | .00105      | 1.00000            | .00105                  |
| .0022 | .00110      | 1.00000            | .00110                  |
| .0023 | .00115      | 1.00000            | .00115                  |
| .0024 | .00120      | 1.00000            | .00120                  |
| .0025 | .00125      | 1.00000<br>1.00000 | .00125                  |
|       |             | 1.00000            | .00130                  |
| .0027 | .00135      | 1.00000            | .00135                  |
| .0028 | .00140      | 1.00000            | .00145                  |
| .0030 | .00150      | 1.00000            | .00150                  |
| .0031 | .00155      | 1.00000            | .00155                  |
| .0032 | .00159      | .99998             | .00161                  |
| .0033 | .00164      | .99998             | .00166                  |
| .0034 | .00169      | .99998             | .00171                  |
| .0035 | .00174      | .99998             | .00176                  |
| .0036 | .00179      | .99998             | .00181                  |
| .0037 | .00184      | .99998             | .00186                  |
| .0038 | .00189      | .99998             | .00191                  |
| .0039 | .00194      | .99998             | .00196                  |
| .0040 | .00199      | .99998             | .00201                  |
| .0041 | .00204      | .99998             | .00206                  |
| .0042 | .00209      | .99998             | .00211                  |
| .0043 | .00214      | .99998             | .00216                  |
| .0044 | .00219      | .99998             | .00221                  |
| .0045 | .00224      | .99998             | .00226                  |
| .0046 | .00229      | .99998             | .00231                  |
| .0047 | .00234      | .99998             | .00236                  |
| .0048 | .00239      | .99998             | .00241                  |
|       | .00244      | .99998             | .00246                  |
| .0050 | .00249      | .99998             | .00251                  |

| P              | C <sub>-1</sub> | <b>c</b> ₀<br>+ | C <sub>1</sub> + |
|----------------|-----------------|-----------------|------------------|
| .0050          | .00249          | .99998          | .00251           |
| .0051          | .00254          | .99998          | .00256           |
| .0052          | .00259          | .99998          | .00261           |
| .0053          | .00264          | .99998          | .00266           |
| .0054          | .00269          | .99998          | .00271           |
| .0055          | .00273          | .99996          | .00277           |
| .0056          | .00278          | .99996          | .00282           |
| .0057          | .00283          | .99996          | .00287           |
| .0058          | .00288          | .99996          | .00292           |
| .0059          | .00293          | .99996          | .00297           |
| .0060          | .00298          | .99996          | .00302           |
| .0061          | .00303          | .99996          | .00307           |
| .0062          | .00308          | .99996          | .00312           |
| .0063          | .00313          | .99996          | .00317           |
| .0064          | .00318          | .99996          | .00322           |
| .0065          | .00323          | .99996          | .00327           |
| .0066          | .00328          | .99996          | .00332           |
| .0067          | .00333          | .99996          | .00337           |
| .0068          | .00338          | .99996          | .00342           |
| .0069          | .00343          | .99996          | .00347           |
| .0070          | .00348          | .99996          | .00352           |
| .0071          | .00352          | .99994          | .00358           |
| .0072          | .00357          | .99994          | .00363           |
| .0073          | .00362          | .99994          | .00368           |
| .0074          | .00367          | .99994          | .00373           |
| .0075          | .00372          | .99994          | .00378           |
| .0076          | .00377          | .99994          | .00383           |
| .0077          | .00382          | .99994          | .00388           |
| .0078          | .00387          | .99994          | .00393           |
| .0079          | .00392          | .99994          | .00398           |
| .0080          | .00397          | .99994          | .00403           |
| .0081          | .00402          | .99994          | .00408           |
| .0082          | .00407          | .99994          | .00413           |
| .0083          | .00412          | .99994          | .00418           |
| .0084          | .00416          | .99992          | .00424           |
| .0085          | .00421          | .99992          | .00429           |
| -              |                 |                 | .00434           |
| .0087<br>.0088 | .00431          | .99992          | .00439           |
| .0089          | .00430          | .99992          | .00444           |
| .0090          | .00446          | .99992          | .00454           |
| .0091          | .00451          | .99992          | .00459           |
| .0091          | .00451          | .99992          | .00459           |
| .0092          | .00450          | .99992          | .00464           |
| .0094          | .00466          | .99992          | .00474           |
| .0095          | .00470          | .99990          | .00480           |
| .0096          | .00475          | .99990          | .00485           |
| .0097          | .00480          | .99990          | .00490           |
| .0098          | .00485          | .99990          | .00495           |
| .0099          | .00490          | .99990          | .00500           |
| .0100          | .00495          | . 99990         | .00505           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P     | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>c</b> <sub>1</sub> + |
|-------|-------------|-----------------|-------------------------|
| .0100 | .00495      | .99990          | .00505                  |
| .0101 | .00500      | .99990          | .00510                  |
| .0102 | .00505      | .99990          | .00515                  |
| .0103 | .00510      | .99990          | .00520                  |
| .0104 | .00515      | .99990          | .00525                  |
| .0105 | .00519      | .99988          | .00531                  |
| .0106 | .00524      | .99988          | .00536                  |
| .0107 | .00529      | .99988          | .00541                  |
| .0108 | .00534      | .99988          | .00546                  |
| .0109 | .00539      | .99988          | .00551                  |
| .0110 | .00544      | .99988          | .00556                  |
| .0111 | .00549      | .99988          | .00561                  |
| .0112 | .00554      | .99988          | .00566                  |
| .0113 | .00559      | .99988          | .00571                  |
| .0114 | .00564      | . 99988         | .00576                  |
| .0115 | .00568      | .99986          | .00582                  |
| .0116 | .00573      | .99986          | .00587                  |
| .0117 | .00578      | .99986          | .00592                  |
| .0118 | .00583      | .99986          | .00597                  |
| .0119 | .00588      | .99986          | .00602                  |
| .0120 | .00593      | .99986          | .00607                  |
| .0121 | .00598      | .99986          | .00612                  |
| .0122 | .00603      | .99986          | .00617                  |
| .0123 | .00607      | .99984          | .00623                  |
| .0124 | .00612      | .99984          | .00628                  |
| .0125 | .00617      | .99984          | .00633                  |
| .0126 | .00622      | .99984          | .00638                  |
| .0127 | .00627      | .99984          | .00643                  |
| .0128 | .00632      | .99984          | .00648                  |
| .0129 | .00637      | .99984          | .00653                  |
| .0130 | .00642      | .99984          | .00658                  |
| .0131 | .00646      | .99982          | .00664                  |
| .0132 | .00651      | .99982          | .00669                  |
| .0133 | .00656      | .99982          | .00674                  |
| .0134 | .00661      | .99982          | .00679                  |
| .0135 | .00666      | .99982          | .00684                  |
| .0136 | .00671      | .99982          | .00689                  |
| .0137 | .00676      | .99982          | .00694                  |
| .0138 | .00680      | .99980          | .00700                  |
| .0139 | .00685      | .99980          | .00705                  |
| .0140 | .00690      | .99980          | .00710                  |
| .0141 | .00695      | .99980          | .00715                  |
| .0142 | .00700      | .99980          | .00720                  |
| .0143 | .00705      | .99980          | .00725                  |
| .0144 | .00710      | .99980          | .00730                  |
| .0145 | .00714      | .99978          | .00736                  |
| .0146 | .00719      | .99978          | .00741                  |
| .0147 | .00724      | .99978          | .00746                  |
| .0148 | .00729      | .99978          | .00751                  |
|       |             |                 |                         |
| .0150 | .00739      | .99978          | .00761                  |

| P     | <b>C</b> -1 | <b>c</b> ₀ + | <b>c</b> <sub>1</sub> + |
|-------|-------------|--------------|-------------------------|
| .0150 | .00739      | .99978       | .00761                  |
| .0151 | .00744      | .99978       | .00766                  |
| .0152 | .00748      | .99976       | .00772                  |
| .0153 | .00753      | .99976       | .00777                  |
| .0154 | .00758      | .99976       | .00782                  |
| .0155 | .00763      | .99976       | .00787                  |
| .0156 | .00768      | .99976       | .00792                  |
| .0157 | .00773      | .99976       | .00797                  |
| .0158 | .00778      | .99976       | .00802                  |
| .0159 | .00782      | .99974       | .00808                  |
| .0160 | .00787      | .99974       | .00813                  |
| .0161 | .00792      | .99974       | .00818                  |
| .0162 | .00797      | .99974       | .00823                  |
| .0163 | .00802      | .99974       | .00828                  |
| .0164 | .00807      | .99974       | .00833                  |
| .0165 | .00811      | .99972       | .00839                  |
| .0167 | .00821      | .99972       | .00849                  |
| .0168 | .00821      | .99972       | .00854                  |
| .0169 | .00831      | .99972       | .00859                  |
| .0170 | .00836      | .99972       | .00864                  |
| .0171 | .00840      | .99970       | .00870                  |
| .0172 | .00845      | .99970       | .00875                  |
| .0173 | .00850      | .99970       | .00880                  |
| .0174 | .00855      | .99970       | .00885                  |
| .0175 | .00860      | .99970       | .00890                  |
| .0176 | .00865      | .99970       | .00895                  |
| .0177 | .00869      | .99968       | .00901                  |
| .0178 | .00874      | .99968       | .00906                  |
| .0119 | .00819      | .99968       | .00911                  |
| .0181 | .00889      | .99968       | .00921                  |
| .0182 | .00893      | .99966       | .00927                  |
| .0183 | .00898      | .99966       | .00932                  |
| .0184 | .00903      | .99966       | .00937                  |
| .0185 | .00908      | .99966       | .00942                  |
| .0186 | .00913      | .99966       | .00947                  |
| .0187 | .00918      | .99966       | .00952                  |
| .0188 | .00922      | .99964       | .00958                  |
| .0189 | .00927      | .99964       | .00963                  |
| .0190 | .00932      | .99964       | .00968                  |
| .0191 | .00937      | .99964       | .00973                  |
| .0192 | .00942      | .99964       | .00978                  |
| .0194 | .00940      | .99962       | .00989                  |
| .0194 | .00956      | .99962       | .00994                  |
| .0196 | .00961      | .99962       | .00999                  |
| .0197 | .00966      | .99962       | .01004                  |
| .0198 | .00970      | .99960       | .01010                  |
| .0199 | .00975      | .99960       | .01015                  |
| .0200 | .00980      | .99960       | .01020                  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | C-1    | <b>c</b> ₀<br>+ | <b>c</b> <sub>1</sub> + |
|--------|--------|-----------------|-------------------------|
| .0200  | .00980 | .99960          | .01020                  |
| .0201  | .00985 | .99960          | .01025                  |
| .0202  | .00990 | . 99960         | .01030                  |
| .0203  | .00994 | .99958          | .01036                  |
| .0204  | .00999 | .99958          | .01041                  |
| .0205  | .01004 | .99958          | .01046                  |
| .0206  | .01009 | .99958          | .01051                  |
| .0207  | .01014 | .99958          | .01056                  |
| .0208  | .01018 | .99956          | .01062                  |
| .0209  | .01023 | .99956          | .01067                  |
| . 0210 | .01028 | . 99956         | .01072                  |
| .0211  | .01033 | .99956          | .01077                  |
| .0212  | .01038 | .99956          | .01082                  |
| .0213  | .01042 | .99954          | .01088                  |
| .0214  | .01047 | .99954          | .01093                  |
| .0215  | .01052 | .99954          | .01098                  |
| .0210  | .01037 | .99952          | .01103                  |
| .0217  | .01061 | .99952          | .01109                  |
| .0219  | .01000 | .99952          | .01119                  |
| .0220  | .01076 | .99952          | .01124                  |
| .0221  | .01081 | .99952          | .01129                  |
| .0222  | .01085 | .99950          | .01135                  |
| .0223  | .01090 | .99950          | .01140                  |
| .0224  | .01095 | .99950          | .01145                  |
| .0225  | .01100 | .99950          | .01150                  |
| .0226  | .01104 | .99948          | .01156                  |
| .0227  | .01109 | .99948          | .01161                  |
| .0228  | .01114 | .99948          | .01166                  |
| .0229  | .01119 | .99948          | .01176                  |
| .0230  | .01124 | .99946          | .01182                  |
| .0231  | .01128 | .99946          | .01187                  |
| .0233  | .01138 | .99946          | .01192                  |
| .0234  | .01143 | .99946          | .01197                  |
| .0235  | .01147 | .99944          | .01203                  |
| .0236  | .01152 | .99944          | .01208                  |
| .0237  | .01157 | .99944          | .01213                  |
| .0238  | .01162 | .99944          | .01218                  |
| .0239  | .01166 | .99942          | .01224                  |
| .0240  | .01171 | .99942          | .01229                  |
| .0241  | .01176 | .99942          | .01234                  |
| .0242  | .01181 | .99942          | .01239                  |
| .0243  | .01190 | .99940          | .01243                  |
| .0244  | .01190 | .99940          | .01255                  |
| .0245  | .01200 | .99940          | .01260                  |
| .0247  | .01204 | .99938          | .01266                  |
| .0248  | .01209 | .99938          | .01271                  |
| .0249  | .01214 | .99938          | .01276                  |
| .0250  | .01219 | .99938          | .01281                  |

| p              | C-1    | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|----------------|--------|------------------|--------------|
| .0250          | .01219 | .99938           | .01281       |
| .0251          | .01223 | .99936           | .01287       |
| .0252          | .01228 | .99936           | .01292       |
| .0253          | .01233 | .99936           | .01297       |
| .0254          | .01238 | .99936           | .01302       |
| .0255          | .01242 | .99934           | .01308       |
| .0256          | .01247 | .99934           | .01313       |
| .0257          | .01252 | .99934           | .01318       |
| .0259          | .01257 | .99932           | .01323       |
| .0260          | .01266 | .99932           | .01334       |
| .0261          | .01271 | .99932           | .01339       |
| .0262          | .01276 | .99932           | .01344       |
| .0263          | .01280 | .99930           | .01350       |
| .0264          | .01285 | .99930           | .01355       |
| .0265          | .01290 | .99930           | .01360       |
|                | 1      |                  | 1            |
| .0267<br>.0268 | .01299 | .99928<br>.99928 | .01371       |
| .0269          | .01304 | .99928           | .01376       |
| .0270          | .01314 | .99928           | .01386       |
| .0271          | .01318 | .99926           | .01392       |
| .0272          | .01323 | .99926           | .01397       |
| .0273          | .01328 | .99926           | .01402       |
| .0274          | .01332 | .99924           | .01408       |
| .0275          | .01337 | .99924           | .01413       |
| .0277          | .01347 | .99924           | .01423       |
| .0278          | .01351 | .99922           | .01429       |
| .0279          | .01356 | .99922           | .01434       |
| .0280          | .01361 | .99922           | .01439       |
| .0281          | .01366 | .99922           | .01444       |
| .0282          | .01370 | .99920           | .01450       |
| .0283          | .01375 | .99920           | .01455       |
| .0284          | .01380 | .99920<br>.99918 | .01460       |
| .0286          | .01389 | .99918           | .01471       |
| .0287          | .01394 | .99918           | .01476       |
| .0288          | .01399 | .99918           | .01481       |
| .0289          | .01403 | .99916           | .01487       |
| .0290          | .01408 | .99916           | .01492       |
| .0291          | .01413 | .99916           | .01497       |
| .0292          | .01417 | .99914           | .01503       |
| .0293          | .01422 | .99914           | .01508       |
| .0294          | .01427 | .99914           | .01513       |
| .0295          | .01431 | .99912           | .01519       |
| .0297          | .01441 | .99912           | .01529       |
| .0298          | .01446 | .99912           | .01534       |
| .0299          | .01450 | .99910           | .01540       |
| .0300          | .01455 | .99910           | .01545       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p     | <b>C</b> -1      | <b>c</b> ₀<br>+ | <b>c</b> <sub>1</sub> + |
|-------|------------------|-----------------|-------------------------|
| .0300 | .01455           | .99910          | .01545                  |
| .0301 | .01460           | .99910          | .01550                  |
| .0302 | .01464           | .99908          | .01556                  |
| .0303 | .01469           | .99908          | .01561                  |
| .0304 | .01474           | .99908          | .01566                  |
| .0305 | .01478           | .99906          | .01572                  |
| .0306 | .01483           | .99906          | .01577                  |
| .0307 | .01488           | .99906          | .01582                  |
| .0308 | .01493           | .99906          | .01593                  |
|       |                  |                 | .01598                  |
| .0310 | .01502           | .99904          |                         |
| .0311 | .01507           | .99904          | .01603                  |
| .0312 | .01511           | .99902          | .01609                  |
| .0313 | .01516           |                 | .01614                  |
| .0314 | .01521<br>.01525 | .99902          | .01619                  |
| .0313 | .01523           | .99900          | .01630                  |
| .0317 | .01535           | .99900          | .01635                  |
| .0318 | .01539           | .99898          | .01641                  |
| .0319 | .01544           | .99898          | .01646                  |
| .0320 | .01549           | .99898          | .01651                  |
| .0321 | .01553           | .99896          | .01657                  |
| .0322 | .01558           | .99896          | .01662                  |
| .0323 | .01563           | .99896          | .01667                  |
| .0324 | .01568           | .99896          | .01672                  |
| .0325 | .01572           | .99894          | .01678                  |
| .0327 | .01582           | .99894          | .01688                  |
| .0327 | .01582           | .99892          | .01694                  |
| .0329 | .01591           | .99892          | .01699                  |
| .0330 | .01596           | .99892          | .01704                  |
| .0331 | .01600           | .99890          | .01710                  |
| .0332 | .01605           | .99890          | .01715                  |
| .0333 | .01610           | .99890          | .01720                  |
| .0334 | .01614           | .99888          | .01726                  |
| .0335 | .01619           | .99888          | .01731                  |
|       | 1                | 1               | j                       |
| .0337 | .01628           | .99886          | .01742                  |
| .0339 | .01638           | .99886          | .01752                  |
| .0340 | .01642           | .99884          | .01758                  |
| .0341 | .01647           | .99884          | .01763                  |
| .0342 | .01652           | .99884          | .01768                  |
| .0343 | .01656           | .99882          | .01774                  |
| .0344 | .01661           | .99882          | .01779                  |
| .0345 | .01665           | .99880          | .01785                  |
| .0346 | .01670           | .99880          | .01790                  |
| .0347 | .01675           | .99880          | .01795                  |
| .0348 | .01679           | .99878          | .01801                  |
|       | <u> </u>         |                 | <del> </del>            |
| .0350 | .01689           | .99878          | .01811                  |

| P     | C-1    | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|-------|--------|------------------|--------------|
| .0350 | .01689 | .99878           | .01811       |
| .0351 | .01693 | .99876           | .01817       |
| .0352 | .01698 | .99876           | .01822       |
| .0353 | .01703 | .99876           | .01827       |
| .0354 | .01707 | .99874           | .01833       |
| .0355 | .01712 | .99874<br>.99874 | .01838       |
| .0357 | .01721 | .99872           | .01849       |
| .0358 | .01721 | .99872           | .01854       |
| .0359 | .01731 | .99872           | .01859       |
| .0360 | .01735 | .99870           | .01865       |
| .0361 | .01740 | .99870           | .01870       |
| .0362 | .01744 | .99868           | .01876       |
| .0363 | .01749 | .99868           | .01881       |
| .0364 | .01754 | .99868           | .01886       |
| .0366 | .01763 | .99866           | .01897       |
| .0367 | .01768 | .99866           | .01902       |
| .0368 | .01772 | .99864           | .01908       |
| .0369 | .01777 | .99864           | .01913       |
| .0370 | .01782 | .99864           | .01918       |
| .0371 | .01786 | .99862           | .01924       |
| .0372 | .01791 | .99862           | .01929       |
| .0373 | .01793 | .99860           | .01933       |
| .0374 | .01805 | .99860           | .01945       |
| .0376 | .01809 | .99858           | .01951       |
| .0377 | .01814 | .99858           | .01956       |
| .0378 | .01819 | .99858           | .01961       |
| .0379 | .01823 | .99856           | .01967       |
| .0380 | .01828 | .99856           | .01972       |
| .0381 | .01832 | .99854           | .01978       |
| .0383 | .01842 | .99854           | .01988       |
| .0384 | .01846 | .99852           | .01994       |
| .0385 | .01851 | .99852           | .01999       |
| .0386 | .01856 | .99852           | .02004       |
| .0387 | .01860 | .99850           | .02010       |
| .0388 | .01865 | .99850           | .02015       |
| .0390 | .01874 | .99848           | .02021       |
| .0391 | .01879 | .99848           | .02031       |
| .0392 | .01883 | .99846           | .02037       |
| .0393 | .01888 | .99846           | .02042       |
| .0394 | .01892 | .99844           | .02048       |
| .0395 | .01897 | .99844           | .02053       |
| .0396 | .01902 | .99844           | .02058       |
| .0398 | .01906 | .99842           | .02064       |
| .0399 | .01915 | .99840           | .02075       |
| .0400 | .01920 | .99840           | .02080       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p     | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|-------|-------------|------------------|-------------------------|
| .0400 | .01920      | .99840           | .02080                  |
| .0401 | .01925      | .99840           | .02085                  |
| .0402 | .01929      | .99838           | .02091                  |
| .0403 | .01934      | .99838           | .02096                  |
| .0404 | .01938      | .99836           | .02102                  |
| .0405 | .01943      | .99836           | .02107                  |
| .0406 | .01948      | .99836           | .02112                  |
| .0407 | .01952      | .99834           | .02118                  |
| .0408 | .01957      | .99834           | .02123                  |
| .0409 | .01961      | .99832           | .02129                  |
| .0410 | .01966      | .99832           | .02134                  |
| .0411 | .01971      | .99832           | .02139                  |
| .0412 | .01975      | .99830           | .02145                  |
|       | .01980      | .99830           | .02150                  |
| .0414 | .01984      | .99828           | .02156                  |
| .0415 | .01989      | .99828<br>.99826 | .02161                  |
| .0417 | .01998      | .99826           | .02172                  |
| .0417 | .01998      | .99826           | .02172                  |
| .0419 | .02003      | .99824           | .02183                  |
| .0420 | .02012      | .99824           | .02188                  |
| .0421 | .02016      | .99822           | .02194                  |
| .0422 | .02021      | .99822           | .02199                  |
| .0423 | .02026      | .99822           | .02204                  |
| .0424 | .02030      | .99820           | .02210                  |
| .0425 | .02035      | .99820           | .02215                  |
| .0426 | .02039      | .99818           | .02221                  |
| .0427 | .02044      | .99818           | .02226                  |
| .0428 | .02048      | .99816           | .02232                  |
| .0429 | .02053      | .99816           | .02237                  |
| .0430 | .02058      | .99816           | .02242                  |
| .0431 | .02062      | .99814           | .02248                  |
| .0432 | .02067      | .99814           | .02253                  |
| .0433 | .02071      | .99812           | .02259                  |
| .0434 | .02076      | .99812           | .02264                  |
| .0435 | .02080      | .99810           | .02270                  |
| .0436 | .02085      | .99810           | .02275                  |
| .0437 | .02090      | .99810           | .02280                  |
| .0438 | .02094      | .99808           | .02286                  |
| .0440 | .02103      | .99806           | .02297                  |
| .0441 | .02108      | .99806           | .02302                  |
| .0442 | .02112      | .99804           | .02308                  |
| .0443 | .02117      | .99804           | .02313                  |
| .0444 | .02121      | .99802           | .02319                  |
| .0445 | .02126      | .99802           | .02324                  |
| .0446 | .02131      | .99802           | .02329                  |
| .0447 | .02135      | .99800           | .02335                  |
| .0448 | .02140      | .99800           | .02340                  |
| .0449 | .02144      | .99798           | .02346                  |
| .0450 | .02149      | .99798           | .02351                  |

| P     | C-1              | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|-------|------------------|------------------|--------------|
| .0450 | .02149           | .99798           | .02351       |
| .0451 | .02153           | .99796           | .02357       |
| .0452 | .02158           | .99796           | .02362       |
| .0453 | .02162           | .99794           | .02368       |
| .0454 | .02167           | .99794           | .02373       |
| .0455 | .02171           | .99792           | .02379       |
| .0456 | .02176           | .99792           | .02384       |
| .0457 | .02181           | .99792           | .02389       |
| .0458 | .02185<br>.02190 | .99790<br>.99790 | .02395       |
| .0460 | .02194           | .99788           | .02406       |
|       |                  |                  |              |
| .0461 | .02199           | .99788           | .02411       |
| .0463 | .02208           | .99786           | .02422       |
| .0464 | .02212           | .99784           | .02428       |
| .0465 | .02217           | .99784           | .02433       |
| .0466 | .02221           | .99782           | .02439       |
| .0467 | .02226           | .99782           | .02444       |
| .0468 | .02230           | .99780           | .02450       |
| .0469 | .02235           | .99780           | .02455       |
| .0470 | .02240           | .99780           | .02460       |
| .0471 | .02244           | .99778           | .02466       |
| .0472 | .02249           | .99778           | .02471       |
| .0473 | .02253           | .99776           | .02477       |
| .0474 | .02258           | .99776<br>.99774 | .02482       |
| .0476 | .02267           | .99774           | .02493       |
| .0477 | .02271           | .99772           | .02499       |
| .0478 | .02276           | .99772           | .02504       |
| .0479 | .02280           | .99770           | .02510       |
| .0480 | .02285           | .99770           | .02515       |
| .0481 | .02289           | .99768           | .02521       |
| .0482 | .02294           | .99768           | .02526       |
| .0483 | .02298           | .99766           | .02532       |
| .0484 | .02303           | .99766           | .02537       |
| .0485 | .02307           | .99764           | .02543       |
| .0487 | .02312           | .99762           | .02554       |
| .0488 | .02321           | .99762           | .02559       |
| .0489 | .02325           | .99760           | .02565       |
| .0490 | .02330           | .99760           | .02570       |
| .0491 | .02334           | .99758           | .02576       |
| .0492 | .02339           | .99758           | .02581       |
| .0493 | .02343           | .99756           | .02587       |
| .0494 | .02348           | .99756<br>.99754 | .02592       |
| .0495 | .02352           | .99754           | .02598       |
| .0497 | .02361           | .99752           | .02609       |
| .0498 | .02366           | .99752           | .02614       |
| .0499 | .02370           | .99750           | .02620       |
| .0500 | .02375           | .99750           | .02625       |
| .2    | <del></del>      | <u> </u>         | L            |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P     | C-1    | <b>C</b> <sub>0</sub> + | <b>c</b> 1 + |   | P              | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|-------|--------|-------------------------|--------------|---|----------------|-------------|------------------|--------------|
| .0500 | .02375 | .99750                  | .02625       |   | .0550          | .02599      | .99698           | .02901       |
| .0501 | .02379 | .99748                  | .02631       |   | .0551          | .02603      | .99696           | .02907       |
| .0502 | .02384 | .99748                  | .02636       |   | .0552          | .02608      | .99696           | .02912       |
| .0503 | .02388 | .99746                  | .02642       |   | .0553          | .02612      | .99694           | .02918       |
| .0504 | .02393 | .99746                  | .02647       |   | .0554          | .02617      | .99694           | .02923       |
| .0505 | .02397 | .99744                  | .02653       |   | .0555          | .02621      | .99692           | .02929       |
| .0506 | .02402 | .99744                  | .02658       |   | .0556          | .02625      | .99690           | .02935       |
| .0507 | .02406 | . 99742                 | .02664       |   | .0557          | .02630      | . 99690          | .02940       |
| .0508 | .02411 | .99742                  | .02669       |   | .0558          | .02634      | .99688           | .02946       |
| .0509 | .02415 | .99740                  | .02675       |   | .0559          | .02639      | .99688           | .02951       |
| .0510 | .02420 | .99740                  | .02680       |   | .0560          | .02643      | .99686           | .02957       |
| .0511 | .02424 | .99738                  | .02686       |   | .0561          | .02648      | .99686           | .02962       |
| .0512 | .02429 | .99738                  | .02691       |   | .0562          | .02652      | .99684           | .02968       |
| .0513 | .02433 | .99736                  | .02697       |   | .0563          | .02657      | .99684           | .02973       |
| .0514 | .02438 | .99736                  | .02702       |   | .0564          | .02661      | .99682           | .02979       |
| .0515 | .02442 | .99734                  | .02708       |   | .0565<br>.0566 | .02665      | .99680<br>.99680 | .02985       |
| .0517 | .02451 | .99732                  | .02719       |   | .0567          | .02674      | .99678           | .02996       |
| .0518 | .02451 | .99732                  | .02724       |   | .0568          | .02679      | .99678           | .03001       |
| .0519 | .02460 | .99730                  | .02730       |   | .0569          | .02683      | .99676           | .03007       |
| .0520 | .02465 | .99730                  | .02735       |   | .0570          | .02688      | .99676           | .03012       |
| .0521 | .02469 | .99728                  | .02741       |   | .0571          | .02692      | . 99674          | .03018       |
| .0522 | .02474 | .99728                  | .02746       |   | .0572          | .02696      | .99672           | .03024       |
| .0523 | .02478 | .99726                  | .02752       |   | .0573          | .02701      | .99672           | .03029       |
| .0524 | .02483 | .99726                  | .02757       |   | .0574          | .02705      | .99670           | .03035       |
| .0525 | .02487 | .99724                  | .02763       |   | .0575          | .02710      | .99670           | .03040       |
| .0526 | .02492 | .99724                  | .02768       |   | .0576          | .02714      | . 99668          | .03046       |
| .0527 | .02496 | .99722                  | .02774       |   | .0577          | .02719      | .99668           | .03051       |
| .0528 | .02501 | .99722                  | .02779       |   | .0578          | .02723      | .99666           | .03057       |
| .0529 | .02505 | . 99720                 | .02785       |   | .0579          | .02727      | .99664           | .03063       |
| .0530 | .02510 | .99720                  | :02790       |   | .0580          | .02732      | .99664           | .03068       |
| .0531 | .02514 | .99718                  | .02796       |   | .0581          | .02736      | .99662           | .03074       |
| .0532 | .02518 | .99716                  | .02802       | 1 | .0582          | .02741      | .99662           | .03079       |
| .0533 | .02523 | .99716                  | .02807       |   | .0583          | .02745      | .99660           | .03085       |
| .0534 | .02527 | .99714                  | .02813       |   | .0584          | .02749      | .99658           | .03091       |
| .0535 | .02532 | .99714                  | .02824       | 1 | .0586          | .02758      | .99656           | .03096       |
| .0537 | .02541 | .99712                  | .02829       |   | .0587          | .02763      | .99656           | .03102       |
| .0538 | .02545 | .99710                  | .02835       | 1 | .0588          | .02767      | .99654           | .03107       |
| .0539 | .02550 | .99710                  | .02840       |   | .0589          | .02772      | .99654           | .03118       |
| .0540 | .02554 | .99708                  | .02846       |   | .0590          | .02776      | .99652           | .03124       |
| .0541 | .02559 | .99708                  | .02851       | ] | .0591          | .02780      | .99650           | .03130       |
| .0542 | .02563 | .99706                  | .02857       |   | .0592          | .02785      | .99650           | .03135       |
| .0543 | .02568 | .99706                  | .02862       |   | .0593          | .02789      | .99648           | .03141       |
| .0544 | .02572 | .99704                  | .02868       |   | .0594          | .02794      | .99648           | .03146       |
| .0545 | .02576 | .99702                  | .02874       |   | .0595          | .02798      | .99646           | .03152       |
| .0546 | .02581 | .99702                  | .02879       |   | .0596          | .02802      | .99644           | .03158       |
| .0547 | .02585 | .99700                  | .02885       |   | .0597          | .02807      | .99644           | .03163       |
| .0548 | .02590 | .99700                  | .02890       |   | .0598          | .02811      | .99642           | .03169       |
| .0549 | .02594 | .99698                  | .02896       | 1 | .0599          | .02816      |                  | .03174       |
| .0550 | .02599 | .99698                  | .02901       | j | .0600          | .02820      | .99640           | .03180       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | <b>C</b> -1      | c <sub>o</sub><br>+ | <b>C</b> 1 + |
|--------|------------------|---------------------|--------------|
| .0600  | .02820           | .99640              | .03180       |
| .0601  | .02824           | .99638              | .03186       |
| .0602  | .02829           | .99638              | .03191       |
| .0603  | .02833           | .99636              | .03197       |
| .0604  | .02838           | .99636              | .03202       |
| .0605  | .02842           | .99634              | .03208       |
| .0606  | .02846           | .99632              | .03214       |
| .0607  | .02851           | .99632              | .03219       |
| .0608  | .02855           | .99630              | .03225       |
| .0609  | .02860           | .99630              | .03230       |
| .0610  | .02864           | .99628              | .03236       |
| .0611  | .02868           | .99626              | .03242       |
| .0612  | .02873           | .99626              | .03247       |
| .0613  | .02877           | .99624              | .03253       |
| .0614  | .02882           | .99624              | .03258       |
| .0615  | .02886<br>.02890 | .99622              | .03264       |
| 1      |                  |                     | 1 1          |
| .0617  | .02895           | .99620              | .03275       |
| .0618  | .02899           | .99616              | .03287       |
| .0620  | .02908           | .99616              | .03292       |
| .0621  | .02900           | .99614              | .03292       |
| .0621  | .02917           | .99614              | .03296       |
| .0623  | .02921           | .99612              | .03309       |
| .0624  | .02925           | .99610              | .03315       |
| .0625  | .02930           | .99610              | .03320       |
| .0626  | .02934           | .99608              | .03326       |
| .0627  | .02938           | .99606              | .03332       |
| .0628  | .02943           | .99606              | .03337       |
| .0629  | .02947           | .99604              | .03343       |
| . 0630 | .02952           | .99604              | .03348       |
| .0631  | .02956           | .99602              | .03354       |
| .0632  | .02960           | .99600              | .03360       |
| .0633  | .02965           | .99600              | .03365       |
| .0634  | .02969           | .99598              | .03371       |
| .0635  | .02973           | .99596              | .03377       |
| .0636  | .02978           | .99596              | .03382       |
| .0637  | .02982           | .99594              | .03388       |
| .0638  | .02986           | .99592              | .03394       |
| .0640  | .02995           | .99590              | .03405       |
| .0641  | .03000           | .99590              | .03410       |
| .0642  | .03004           | .99588              | .03416       |
| .0643  | .03008           | .99586              | .03422       |
| .0644  | .03013           | . 99 586            | .03427       |
| .0645  | .03017           | .99584              | .03433       |
| .0646  | .03021           | .99582              | .03439       |
| .0647  | .03026           | . 99582             | .03444       |
| .0648  | .03030           | .99580              | .03450       |
| .0649  | .03034           | .99578              | .03456       |
| •0650  | .03039           | .99578              | .03461       |

| P     | C-1              | <b>c</b> +       | <b>C</b> 1 |
|-------|------------------|------------------|------------|
| .0650 | .03039           | .99578           | .03461     |
| .0651 | .03043           | .99576           | .03467     |
| .0652 | .03047           | .99574           | .03473     |
| .0653 | .03052           | .99574           | .03478     |
| .0654 | .03056           | .99572           | .03484     |
| .0655 | .03060           | .99570           | .03490     |
| .0656 | .03065           | .99570           | .03495     |
| .0657 | .03069           | .99568           | .03501     |
| .0658 | .03074           | .99568<br>.99566 | .03506     |
| .0660 | .03082           | .99564           | .03518     |
| .0661 | .03087           | . 99564          | .03523     |
| .0662 | .03091           | .99562           | .03529     |
| .0663 | .03095           | .99560           | .03535     |
| .0664 | .03100           | .99560           | .03540     |
| .0665 | .03104           | .99558           | .03546     |
| .0666 | .03108           | .99556           | .03552     |
| .0667 | .03113           | .99556           | .03557     |
| .0668 | .03117<br>.03121 | .99554<br>.99552 | .03563     |
| .0670 | .03121           | .99552           | .03574     |
| .0671 | .03130           | .99550           | .03580     |
| .0672 | .03134           | .99548           | .03586     |
| .0673 | .03139           | .99548           | .03591     |
| .0674 | .03143           | .99546           | .03597     |
| .0675 | .03147           | .99544           | .03603     |
| .0676 | .03152           | .99544           | .03608     |
| .0677 | .03156           | .99542           | .03614     |
| .0678 | .03160           | .99540           | .03620     |
| .0680 | .03169           | .99538           | .03631     |
| .0681 | .03173           | .99536           | .03637     |
| .0682 | .03177           | .99534           | .03643     |
| .0683 | .03182           | .99534           | .03648     |
| .0684 | .03186           | .99532           | .03654     |
| .0685 | .03190           | .99530           | .03660     |
| .0686 | .03195           | .99530           | .03665     |
| .0687 | .03199           | .99528<br>.99526 | .03671     |
| .0689 | .03203           | .99526           | .03682     |
| .0690 | .03212           | .99524           | .03688     |
| .0691 | .03216           | .99522           | .03694     |
| .0692 | .03221           | .99522           | .03699     |
| .0693 | .03225           | .99520           | .03705     |
| .0694 | .03229           | .99518           | .03711     |
| .0696 | .03233           | .99516           | .03717     |
| .0697 | .03242           | .99514           | .03728     |
| .0698 | .03246           | .99512           | .03734     |
| .0699 | .03251           | .99512           | .03739     |
| .0700 | .03255           | .99510           | .03745     |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P         | C-1    | ů†      | <b>C</b> 1 + |
|-----------|--------|---------|--------------|
| .0700     | .03255 | .99510  | .03745       |
| .0701     | .03259 | .99508  | .03751       |
| .0702     | .03264 | .99508  | .03756       |
| .0703     | .03268 | .99506  | .03762       |
| .0704     | .03272 | .99504  | .03768       |
| .0705     | .03276 | .99502  | .03774       |
| .0706     | .03281 | .99502  | .03779       |
| .0707     | .03285 | .99500  | .03785       |
| .0708     | .03289 | .99498  | .03791       |
| .0709     | .03294 | .99498  | .03796       |
| .0710     | .03298 | .99496  | .03802       |
| .0711     | .03302 | .99494  | .03808       |
| .0712     | .03307 | .99494  | .03813       |
| .0713     | .03311 | .99492  | .03819       |
| .0714     | .03315 | .99490  | .03825       |
| .0715     | .03319 | .99488  | .03831       |
| .0716     | .03324 | .99488  | .03836       |
| .0717     | .03328 | .99486  | .03842       |
| .0718     | .03332 | .99484  | .03848       |
| .0719     | .03337 | .99484  | .03853       |
| .0720     | .03341 | .99482  | .03859       |
| .0721     | .03345 | .99480  | .03865       |
| .0722     | .03349 | .99478  | .03871       |
| 1         |        | t .     | 1 1          |
| .0724     | .03358 | .99476  | .03882       |
| .0726     | .03366 | .99474  | .03894       |
| .0727     | .03371 | .99472  | .03899       |
| .0728     | .03375 | .99470  | .03905       |
| .0729     | .03379 | .99468  | .03911       |
| .0730     | .03384 | .99468  | .03916       |
| .0731     | .03388 | .99466  | 03922        |
| .0732     | .03392 | . 99464 | .03928       |
| .0733     | .03396 | .99462  | .03934       |
| .0734     | .03401 | .99462  | .03939       |
| .0735     | .03405 | .99460  | .03945       |
| .0736     | .03409 | .99458  | .03951       |
| .0737     | .03413 | .99456  | .03957       |
| .0738     | .03418 | .99456  | .03962       |
| . 07 39   | .03422 | .99454  | .03968       |
| . 0740    | .03426 | .99452  | .03974       |
| .0741     | .03430 | .99450  | .03980       |
| .0742     | .03435 | .99450  | .03985       |
| .0743     | .03439 | .99448  | .03991       |
| .0744     | .03443 | .99446  | .03997       |
| .0745     | .03447 | .99444  | .04003       |
|           | i      |         |              |
| .0747     | .03456 | .99442  | .04014       |
| , 11 / AX | .03400 |         | 1            |
| .0749     | .03464 | .99438  | .04026       |

| p              | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |
|----------------|------------------------|------------------|------------------|
| .0750          | .03469                 | .99438           | .04031           |
| .0751          | .03473                 | . 99436          | .04037           |
| .0752          | .03477                 | . 99434          | .04043           |
| .0753          | .03481                 | .99432           | .04049           |
| .0754          | .03486                 | .99432           | .04054           |
| .0755          | .03490                 | .99430           | .04060           |
| .0756          | .03494                 | .99428           | .04066           |
| .0757          | .03498                 | .99426           | .04072           |
| .0758          | .03503                 | .99426           | .04077           |
| .0759          | .03507                 | .99424           | .04083           |
| .0760          | .03511                 | .99422           | .04089           |
| .0761<br>.0762 | .03515                 | .99420<br>.99420 | .04095           |
| .0762          | .03524                 | .99420           | .04106           |
| .0764          | .03524                 | .99416           | .04112           |
| .0765          | .03528                 | .99414           | .04112           |
| .0766          | .03537                 | .99414           | .04123           |
| .0767          | .03541                 | .99412           | .04129           |
| .0768          | .03545                 | .99410           | .04135           |
| .0769          | .03549                 | .99408           | .04141           |
| .0770          | .03554                 | .99408           | .04146           |
| .0771          | .03558                 | .99406           | .04152           |
| .0772          | .03562                 | .99404           | .04158           |
| .0773          | .03566                 | .99402           | .04164           |
| .0774          | .03570                 | .99400           | .04170           |
| .0775          | .03575                 | .99400<br>.99398 | .04175<br>.04181 |
| .0777          | .03583                 | .99396           | .04187           |
| .0778          | .03587                 | .99394           | .04193           |
| .0779          | .03592                 | .99394           | .04198           |
| .0780          | .03596                 | .99392           | .04204           |
| .0781          | .03600                 | .99390           | .04210           |
| .0782          | .03604                 | .99388           | .04216           |
| .0783          | .03608                 | .99386           | .04222           |
| .0784          | .03613                 | .99386           | .04227           |
| .0785          | .03621                 | .99384           | .04233           |
| .0787          | .03625                 | .99380           | .04239           |
| .0788          | .03630                 | .99380           | .04245           |
| .0789          | .03634                 | .99378           | .04256           |
| .0790          | .03638                 | .99376           | .04262           |
| .0791          | .03642                 | .99374           | .04268           |
| .0792          | .03646                 | .99372           | .04274           |
| .0793          | .03651                 | .99372           | .04279           |
| .0794          | .03655                 | .99370           | .04285           |
| .0795          | .03659                 | .99368           | .04291           |
| .0796          | .03663                 | .99366           | .04297           |
| .0797          | .03667                 | .99364           | .04303           |
| .0798          | .03672                 | .99364           | .04308           |
| .0800          | .03680                 | .99360           | .04314           |
|                | . 00000                |                  | .04020           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p     | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>c</b> 1 + |
|-------|-------------|-----------------|--------------|
| .0800 | .03680      | .99360          | .04320       |
| .0801 | .03684      | .99358          | .04326       |
| .0802 | .03688      | .99356          | .04332       |
| .0803 | .03693      | .99356          | .04337       |
| .0804 | .03697      | . 99354         | .04343       |
| .0805 | .03701      | .99352          | .04349       |
| .0806 | .03705      | .99350          | .04355       |
| .0807 | .03709      | .99348          | .04361       |
| .0808 | .03714      | .99348          | .04366       |
| .0809 | .03718      | .99346          | .04372       |
| .0810 | .03722      | .99344          | .04378       |
| .0811 | .03726      | .99342          | .04384       |
| .0812 | .03730      | .99340          | .04390       |
| .0813 | .03735      | .99340          | .04395       |
| .0814 | .03739      | .99338          | .04401       |
| .0815 | .03743      | .99336          | .04407       |
| .0816 | .03747      | .99334          | .04413       |
| .0817 | .03751      | .99332          | .04419       |
| .0818 | .03755      | .99330          | .04425       |
| .0819 | .03764      | .99330          | .04430       |
| .0820 | .03768      | .99328          | .04436       |
| .0821 | .03772      | .99326          | .04442       |
| .0823 | .03776      | .99322          | .04454       |
| .0824 | .03781      | .99322          | .04459       |
| .0825 | .03785      | .99320          | .04465       |
| .0826 | .03789      | .99318          | .04471       |
| .0827 | .03793      | .99316          | .04477       |
| .0828 | .03797      | .99314          | .04483       |
| .0829 | .03801      | .99312          | .04489       |
| .0830 | .03806      | .99312          | .04494       |
| .0831 | .03810      | .99310          | .04500       |
| .0832 | .03814      | .99308          | .04506       |
| .0833 | .03818      | .99306          | .04512       |
| .0834 | .03822      | .99304          | .04518       |
| .0835 | .03826      | .99302          | .04524       |
| .0836 | .03831      | .99302          | .04529       |
| .0837 | .03835      | .99300          | .04535       |
| .0838 | .03839      | .99298          | .04541       |
| .0839 | .03843      | .99296          | .04547       |
| .0841 | .03847      |                 | .04559       |
| .0841 | .03851      | .99292          | .04559       |
| .0842 | .03860      | .99292          | .04570       |
| .0844 | .03864      | .99288          | .04576       |
| .0845 | .03868      | .99286          | .04582       |
| .0846 | .03872      | .99284          | .04588       |
| .0847 | .03876      | .99282          | .04594       |
| .0848 | .03880      | .99280          | .04600       |
| .0849 | .03885      | .99280          | .04605       |
| .0850 | .03889      | .99278          | .04611       |

| p              | <b>C</b> -1 | <b>c</b> ₀<br>+  | C <sub>1</sub> |  |
|----------------|-------------|------------------|----------------|--|
| .0850          | .03889      | .99278           | .04611         |  |
| .0851          | .03893      | .99276           | .04617         |  |
| .0852          | .03897      | .99274           | .04623         |  |
| .0853          | .03901      | .99272           | .04629         |  |
| .0854          | .03905      | .99270           | .04635         |  |
| .0855          | .03909      | .99268           | .04641         |  |
| .0856          | .03914      | .99268           | .04646         |  |
| .0857<br>.0858 | .03918      | .99266           | .04652         |  |
| .0859          | .03922      | .99264<br>.99262 | .04658         |  |
|                |             |                  |                |  |
| .0860          | .03930      | .99260           | .04670         |  |
| .0861          | .03934      | .99258           | .04676         |  |
| .0862          | .03938      | .99256<br>.99256 | .04682         |  |
| .0864          | .03947      | .99254           | .04693         |  |
| .0865          | .03947      | .99252           | .04699         |  |
| .0866          | .03955      | .99250           | .04705         |  |
| .0867          | .03959      | .99248           | .04711         |  |
| .0868          | .03963      | .99246           | .04717         |  |
| .0869          | .03967      | .99244           | .04723         |  |
| .0870          | .03972      | .99244           | .04728         |  |
| .0871          | .03976      | .99242           | .04734         |  |
| .0872          | .03980      | .99240           | .04740         |  |
| .0873          | .03984      | .99238           | .04746         |  |
| .0874          | .03988      | .99236           | .04752         |  |
| .0875          | .03992      | .99234           | .04758         |  |
|                | 1           | }                |                |  |
| .0877          | .04000      | .99230           | .04770         |  |
| .0879          | .04009      | .99228           | .04781         |  |
| .0880          | .04013      | .99226           | .04787         |  |
| .0881          | .04017      | .99224           | .04793         |  |
| .0882          | .04021      | .99222           | .04799         |  |
| .0883          | .04025      | .99220           | .04805         |  |
| .0884          | .04029      | .99218           | .04811         |  |
| .0885          | .04033      | .99216           | .04817         |  |
| .0886          | .04038      | .99216           | .04822         |  |
| .0887          | .04042      | .99214           | .04828         |  |
| .0889          | .04046      | .99212           | .04834         |  |
| .0890          | .04054      | .99208           | .04846         |  |
| .0891          | .04058      | .99206           | .04852         |  |
| .0892          | .04038      | .99204           | .04858         |  |
| .0893          | .04066      | .99202           | .04864         |  |
| .0894          | .04070      | .99200           | .04870         |  |
| .0895          | .04074      | .99198           | .04876         |  |
| .0896          | .04079      | .99198           | .04881         |  |
| .0897          | .04083      | .99196           | .04887         |  |
| .0898          | .04087      | .99194           | .04893         |  |
| .0899          | .04091      | .99192           | .04899         |  |
| . 0900         | .04095      | .99190           | .04905         |  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | C-1    | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |  |
|--------|--------|------------------|-------------------------|--|
| .0900  | .04095 | .99190           | .04905                  |  |
| .0901  | .04099 | .99188           | .04911                  |  |
| .0902  | .04103 | .99186           | .04917                  |  |
| .0903  | .04107 | .99184           | .04923                  |  |
| .0904  | .04111 | .99182           | .04929                  |  |
| . 0905 | .04115 | .99180           | .04935                  |  |
| .0906  | .04120 | .99180           | .04940                  |  |
| .0907  | .04124 | .99178           | .04946                  |  |
| .0908  | .04128 | .99176           | .04952                  |  |
| .0909  | .04132 | .99174           | .04958                  |  |
| .0910  | .04136 | .99172           | .04964                  |  |
| .0911  | .04140 | .99170           | .04970                  |  |
| .0912  | .04144 | .99168           | .04976                  |  |
| .0913  | .04148 | .99166           | .04982                  |  |
| .0914  | .04152 | .99164           | .04988                  |  |
| .0915  | .04156 | .99162           | .04994                  |  |
| .0916  | .04160 | .99160           | .05000                  |  |
| .0917  | .04165 | .99160           | .05005                  |  |
| .0918  | .04169 | .99158           | .05011                  |  |
|        |        | .99156           |                         |  |
| .0920  | .04177 | .99154           | .05023                  |  |
| .0921  | .04181 | .99152<br>.99150 | .05029                  |  |
| .0923  | .04183 | .99148           | .05041                  |  |
| .0924  | .04193 | .99146           | .05047                  |  |
| .0924  | .04193 | .99146           | .05053                  |  |
| .0926  | .04201 | .99142           | .05059                  |  |
| .0927  | .04205 | .99140           | .05065                  |  |
| .0928  | .04209 | .99138           | .05071                  |  |
| .0929  | .04213 | .99136           | .05077                  |  |
| .0930  | .04218 | .99136           | .05082                  |  |
| .0931  | .04222 | .99134           | .05088                  |  |
| .0932  | .04226 | .99132           | .05094                  |  |
| .0933  | .04230 | .99130           | .05100                  |  |
| .0934  | .04234 | .99128           | .05106                  |  |
| .0935  | .04238 | .99126           | .05112                  |  |
| .0936  | .04242 | .99124           | .05118                  |  |
| .0937  | .04246 | .99122           | .05124                  |  |
| .0938  | .04250 | .99120           | .05130                  |  |
| .0939  | .04254 | .99118           | .05136                  |  |
| . 0940 | .04258 | .99116           | .05142                  |  |
| .0941  | .04262 | .99114           | .05148                  |  |
| .0942  | .04266 | .99112           | .05154                  |  |
| .0943  | .04270 | .99110           | .05160                  |  |
| .0944  | .04274 | .99108           | .05166                  |  |
| .0945  | .04278 | .99106           | .05172                  |  |
|        | 1      | 1                | i                       |  |
| .0947  | .04287 | .99104           | .05183                  |  |
| .0948  | .04291 | .99102           | .05195                  |  |
|        |        |                  |                         |  |
| .0950  | .04299 | .99098           | .05201                  |  |

| P     | C-1<br>— | <b>c</b> ₀<br>+  | <b>c</b> 1 + |
|-------|----------|------------------|--------------|
| .0950 | .04299   | .99098           | .05201       |
| .0951 | .04303   | .99096           | .05207       |
| .0952 | .04307   | .99094           | .05213       |
| .0953 | .04311   | .99092           | .05219       |
| .0954 | .04315   | .99090           | .05225       |
| .0955 | .04319   | .99088           | .05231       |
| .0956 | .04323   | .99086           | .05237       |
| .0957 | .04327   | .99084           | .05243       |
| .0958 | .04331   | .99082           | .05249       |
| .0959 | .04335   | .99080           | .05255       |
| .0960 | .04339   | .99078           | .05261       |
| .0961 | .04343   | .99076           | .05267       |
| .0962 | .04347   | .99074           | .05273       |
|       | l .      |                  | 1 1          |
| .0964 | .04355   | .99070           | .05285       |
| .0966 | .04363   | .99066           | .05297       |
| .0967 | .04367   | .99064           | .05303       |
| .0968 | .04371   | .99062           | .05309       |
| .0969 | .04376   | .99062           | .05314       |
| .0970 | .04380   | .99060           | .05320       |
| .0971 | .04384   | .99058           | .05326       |
| .0972 | .04388   | .99056           | .05332       |
| .0973 | .04392   | .99054           | .05338       |
| .0974 | .04396   | .99052           | .05344       |
| .0975 | .04400   | .99050<br>.99048 | .05350       |
| .0977 | .04408   | .99046           | .05362       |
| .0978 | .04412   | .99044           | .05368       |
| .0979 | .04416   | .99042           | .05374       |
| .0980 | .04420   | .99040           | .05380       |
| .0981 | .04424   | .99038           | .05386       |
| .0982 | .04428   | .99036           | .05392       |
| .0983 | .04432   | .99034           | .05398       |
| .0984 | .04436   | .99032           | .05404       |
| .0985 | .04440   | .99030           | .05410       |
| .0987 | .04444   | .99026           | .05422       |
| .0988 | .04452   | .99024           | .05428       |
| .0989 | .04456   | .99022           | .05434       |
| .0990 | .04460   | .99020           | .05440       |
| .0991 | .04464   | .99018           | .05446       |
| .0992 | .04468   | .99016           | .05452       |
| .0993 | .04472   | .99014           | .05458       |
| .0994 | .04476   | .99012           | .05464       |
| .0995 | .04480   | .99010           | .05470       |
| .0996 | .04484   | .99008           | .05476       |
| .0997 | .04488   | .99006           | .05482       |
| .0999 | .04492   | .99004           | .05494       |
| .1000 | .04500   | .99000           | .05500       |
| 7     | . 0.2000 |                  | 1 . 00000    |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

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| p      | <b>C</b> -1 | <b>c</b> <sub>0</sub> + | <b>c</b> <sub>1</sub> + |     | P      | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>C</b> 1 + |
|--------|-------------|-------------------------|-------------------------|-----|--------|-------------|-----------------|--------------|
| .1000  | .04500      | .99000                  | .05500                  |     | .1050  | .04699      | .98898          | .05801       |
| . 1001 | .04504      | .98998                  | .05506                  | 1 1 | .1051  | .04703      | .98896          | .05807       |
| .1002  | .04508      | .98996                  | .05512                  |     | .1052  | .04707      | .98894          | .05813       |
| .1003  | .04512      | .98994                  | .05518                  |     | .1053  | .04711      | .98892          | .05819       |
| .1004  | .04516      | .98992                  | .05524                  |     | . 1054 | .04715      | .98890          | .05825       |
| .1005  | .04520      | .98990                  | .05530                  |     | .1055  | .04718      | .98886          | .05832       |
| . 1006 | .04524      | .98988                  | .05536                  |     | .1056  | .04722      | .98884          | .05838       |
| .1007  | .04528      | .98986                  | .05542                  | l l | .1057  | .04726      | .98882          | .05844       |
| .1008  | .04532      | .98984                  | .05548                  |     | . 1058 | .04730      | .98880          | .05850       |
| . 1009 | .04536      | .98982                  | .05554                  |     | . 1059 | .04734      | .98878          | .05856       |
| .1010  | .04540      | . 98980                 | .05560                  |     | .1060  | .04738      | .98876          | .05862       |
| . 1011 | .04544      | . 98978                 | .05566                  | 1 1 | .1061  | .04742      | .98874          | .05868       |
| . 1012 | .04548      | .98976                  | .05572                  |     | .1062  | .04746      | .98872          | .05874       |
| .1013  | .04552      | .98974                  | .05578                  |     | .1063  | .04750      | .98870          | .05880       |
| .1014  | .04556      | .98972                  | .05584                  |     | .1064  | .04754      | .98868          | .05886       |
| . 1015 | .04560      | .98979                  | .05590                  |     | .1065  | .04758      | .98866          | .05892       |
| .1016  | .04564      | . 98968                 | .05596                  |     | .1066  | .04762      | .98864          | .05898       |
| .1017  | .04568      | .98966                  | .05602                  |     | .1067  | .04766      | .98862          | .05904       |
| .1018  | .04572      | .98964                  | .05608                  |     | .1068  | .04770      | .98860          | .05910       |
| .1019  | .04576      | .98962                  | .05614                  |     | . 1069 | .04774      | .98858          | .05916       |
| .1020  | .04580      | .98960                  | .05620                  |     | .1070  | .04778      | .98856          | .05922       |
| .1021  | .04584      | .98958                  | .05626                  | l [ | .1071  | .04781      | . 988 52        | .05929       |
| .1022  | .04588      | .98956                  | .05632                  |     | .1072  | .04785      | .98850          | .05935       |
| .1023  | .04592      | .98954                  | .05638                  | 1   | .1073  | .04789      | .98848          | .05941       |
| .1024  | .04596      | .98952                  | .05644                  |     | .1074  | .04793      | .98846          | .05947       |
| . 1025 | .04600      | .98950                  | .05650                  |     | .1075  | .04797      | .98844          | .05953       |
| .1026  | .04604      | .98948                  | .05656                  |     | .1076  | .04801      | .98842          | .05959       |
| .1027  | .04608      | . 98946                 | .05662                  |     | .1077  | .04805      | .98840          | .05965       |
| . 1028 | .04612      | .98944                  | .05668                  |     | .1078  | .04809      | .98838          | .05971       |
| .1029  | .04616      | .98942                  | .05674                  |     | .1079  | .04813      | .98836          | .05977       |
| .1030  | .04620      | .98940                  | .05680                  |     | .1080  | .04817      | .98834          | .05983       |
| . 1031 | .04624      | .98938                  | .05686                  |     | .1081  | .04821      | .98832          | .05989       |
| .1032  | .04627      | .98934                  | .05693                  |     | .1082  | .04825      | .98830          | .05995       |
| . 1033 | .04631      | .98932                  | .05699                  |     | .1083  | .04829      | .98828          | .06001       |
| .1034  | .04635      | .98930                  | .05705                  |     | .1084  | .04832      | .98824          | .06008       |
| .1035  | .04639      | .98928                  | .05711                  |     | .1085  | .04836      | .98822          | .06014       |
| . 1036 | .04643      | .98926                  | .05717                  |     | .1086  | .04840      | .98820          | .06020       |
| .1037  | .04647      | .98924                  | .05723                  |     | .1087  | .04844      | .98818          | .06026       |
| .1038  | .04651      | .98922                  | .05729                  |     | .1088  | .04848      | .98816          | .06032       |
| . 1039 | .04655      | .98920                  | .05735                  |     | .1089  | .04852      | .98814          | .06038       |
| .1040  | .04659      | .98918                  | .05741                  |     | .1090  | .04856      | .98812          | .06044       |
| .1041  | .04663      | .98916                  | .05747                  |     | .1091  | .04860      | .98810          | .06050       |
| .1042  | .04667      | .98914                  | .05753                  |     | .1092  | .04864      | .98808          | .06056       |
| .1043  | .04671      | .98912                  | .05759                  |     | .1093  | .04868      | .98806          | .06062       |
| .1044  | .04675      | .98910                  | .05765                  |     | .1094  | .04872      | .98804          | .06068       |
| .1045  | .04679      | .98908                  | .05771                  |     | .1095  | .04875      | .98800          | .06075       |
| .1046  | .04683      | .98906                  | .05777                  | 1 1 | .1096  | .04879      | .98798          | .06081       |
| .1047  | .04687      | .98904                  | .05783                  |     | .1097  | .04883      | .98796          | .0608        |
| . 1048 | .04691      | .98902                  | .05789                  |     | .1098  | .04887      | .98794          | .0609        |
| . 1049 | .04695      | .98900                  | .05795                  |     | .1099  | .04891      | .98792          | .06099       |
| .1050  | .04699      | .98898                  | .05801                  | ]   | .1100  | .04895      | .98790          | .0610        |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | <b>c</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> 1 + |   | P              | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|--------|-------------|------------------|--------------|---|----------------|------------------|------------------|--------------|
| .1100  | .04895      | .98790           | .06105       |   | .1150          | .05089           | .98678           | .06411       |
| .1101  | .04899      | .98788           | .06111       |   | .1151          | .05093           | .98676           | .06417       |
| .1102  | .04903      | .98786           | .06117       |   | .1152          | .05096           | .98672           | .06424       |
| .1103  | .04907      | .98784           | .06123       |   | .1153          | .05100           | .98670           | .06430       |
| .1104  | .04911      | .98782           | .06129       |   | .1154          | .05104           | .98668           | .06436       |
| .1105  | .04914      | .98778           | .06136       |   | .1155          | .05108           | .98666           | .06442       |
| .1106  | .04918      | .98776           | .06142       |   | .1156          | .05112           | . 98664          | .06448       |
| .1107  | .04922      | .98774           | .06148       |   | .1157          | .05116           | .98662           | .06454       |
| .1108  | .04926      | .98772           | .06154       |   | .1158          | .05120           | .98660           | .06460       |
| .1109  | .04930      | .98770           | .06160       |   | .1159          | .05123           | .98656           | .06467       |
| .1110  | .04934      | .98768           | .06166       |   | .1160          | .05127           | .98654           | .06473       |
| .1111  | .04938      | .98766           | .06172       |   | .1161          | .05131           | .98652           | .06479       |
| .1112  | .04942      | .98764           | .06178       |   | .1162          | .05135           | .98650           | .06485       |
| .1113  | .04946      | .98762           | .06184       | i | .1163          | .05139           | .98648           | .06491       |
| .1114  | .04950      | .98760           | .06190       |   | .1164          | .05143           | .98646           | .06497       |
| .1115  | .04953      | .98756<br>.98754 | .06197       |   | .1165<br>.1166 | .05146<br>.05150 | .98642<br>.98640 | .06504       |
| .1116  | 1           |                  | .06203       |   |                |                  | i                | 1            |
| .1117  | .04961      | .98752           | .06209       |   | .1167          | .05154           | .98638<br>.98636 | .06516       |
| .1118  | .04965      | .98750<br>.98748 | .06215       |   | .1169          | .05158<br>.05162 | .98634           | .06528       |
|        |             |                  |              |   |                |                  |                  | <del></del>  |
| .1120  | .04973      | .98746           | .06227       | 1 | .1170          | .05166           | .98632           | .06534       |
| .1121  | .04977      | .98744           | .06233       |   | .1171          | .05169<br>.05173 | .98628<br>.98626 | .06541       |
| .1122  | .04981      | .98742           | .06246       |   | .1173          | .05173           | .98624           | .06553       |
| .1124  | .04988      | .98736           | .06252       |   | .1174          | .05181           | .98622           | .06559       |
| .1124  | .04992      | .98734           | .06258       |   | .1175          | .05185           | .98620           | .06565       |
| .1126  | .04996      | .98732           | .06264       |   | .1176          | .05189           | .98618           | .06571       |
| .1127  | .05000      | .98730           | .06270       |   | .1177          | .05192           | .98614           | .06578       |
| .1128  | .05004      | .98728           | .06276       |   | .1178          | .05196           | .98612           | .06584       |
| .1129  | .05008      | .98726           | .06282       |   | .1179          | .05200           | .98610           | .06590       |
| .1130  | .05012      | . 98724          | .06288       |   | .1180          | .05204           | .98608           | .06596       |
| .1131  | .05015      | .98720           | .06295       |   | .1181          | .05208           | .98606           | .06602       |
| .1132  | .05019      | .98718           | .06301       |   | . 1182         | .05211           | .98602           | .06609       |
| .1133  | .05023      | .98716           | .06307       |   | .1183          | .05215           | .98600           | .06615       |
| .1134  | .05027      | .98714           | .06313       |   | .1184          | .05219           | .98598           | .06621       |
| .1135  | .05031      | .98712           | .06319       |   | .1185          | .05223           | .98596           | .06627       |
| .1136  | .05035      | .98710           | 1            |   |                | .05227           |                  | .06639       |
| .1137  | .05039      | .98708           | .06331       |   | .1187          | .05231           | .98592<br>.98588 | .06646       |
| .1138  | .05042      | .98702           | .06344       |   | .1189          | .05234           | .98586           | .06652       |
| .1140  | .05050      | .98700           | .06350       | 1 | .1190          | .05242           | .98584           | .06658       |
| .1141  | .05054      | .98698           | .06356       | 1 | .1191          | .05246           | .98582           | .06664       |
| .1142  | .05058      | . 98696          | .06362       |   | .1192          | .05250           | .98580           | .06670       |
| .1143  | .05062      | .98694           | .06368       |   | .1193          | .05253           | .98576           | .06677       |
| . 1144 | .05066      | .98692           | .06374       |   | .1194          | .05257           | . 98574          | .06683       |
| .1145  | .05069      | .98688           | .06381       |   | .1195          | .05261           | .98572           | .06689       |
| .1146  | .05073      | .98686           | .06387       |   | .1196          | .05265           | .98570           | .06695       |
| .1147  | .05077      | .98684           | .06393       |   | .1197          | .05269           | .98568           | .06701       |
| .1148  | .05081      | .98682           | .06399       |   | .1198          | .05272           | .98564           | .06708       |
| .1149  | .05085      | .98680           | .06405       |   | .1199          | .05276           | .98562           | .06714       |
| .1150  | .05089      | .98678           | .06411       |   | .1200          | .05280           | .98560           | .06720       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>C</b> 1 +     |  |
|--------|-------------|-----------------|------------------|--|
| .1200  | .05280      | .98560          | .06720           |  |
| .1201  | .05284      | .98558          | .06726           |  |
| .1202  | .05288      | .98556          | .06732           |  |
| .1203  | .05291      | .98552          | .06739           |  |
| . 1204 | .05295      | .98550          | .06745           |  |
| .1205  | .05299      | .98548          | .06751           |  |
| .1206  | .05303      | .98546          | .06757           |  |
| .1207  | .05307      | .98544          | .06763           |  |
| .1208  | .05310      | .98540          | .06770           |  |
| .1209  | .05314      | .98538          | .06776           |  |
| .1210  | .05318      | .98536          | .06782           |  |
| .1211  | .05322      | .98534          | .06788           |  |
| .1212  | .05326      | .98532          | .06794           |  |
| .1213  | .05329      | .98528          | .06801           |  |
| .1214  | .05333      | .98526          | .06807           |  |
| .1215  | .05337      | .98524          | .06813<br>.06819 |  |
|        | .05341      | .98518          | .06826           |  |
| .1217  | .05344      | .98518          | .06832           |  |
| .1219  | .05352      | .98514          | .06838           |  |
| .1220  | .05356      | .98512          | .06844           |  |
| .1221  | .05360      | .98510          | .06850           |  |
| .1222  | .05363      | .98506          | .06857           |  |
| .1223  | .05367      | .98504          | .06863           |  |
| .1224  | .05371      | .98502          | .06869           |  |
| .1225  | .05375      | .98500          | .06875           |  |
| .1226  | .05378      | .98496          | .06882           |  |
| .1227  | .05382      | .98494          | .06888           |  |
| .1228  | .05386      | .98492          | .06894           |  |
| .1229  | .05390      | .98490          | .06900           |  |
| .1230  | .05394      | .98488          | .06906           |  |
| .1231  | .05397      | .98484          | .06913           |  |
| .1232  | .05401      | .98482          | .06919           |  |
| .1233  | .05405      | .98480          | .06925           |  |
| .1234  | .05409      | .98478          | .06931           |  |
| .1235  | .05412      | .98474          | .06938           |  |
| .1236  | .05416      | .98472          | .06944           |  |
| .1237  | .05420      | .98470          | .06950           |  |
| .1238  | .05424      | .98468          | .06956           |  |
| .1239  | .05421      | .98462          | .06969           |  |
|        | .05435      | .98460          | .06975           |  |
| .1241  | .05435      | .98458          | .06981           |  |
| .1242  | .05442      | .98454          | .06988           |  |
| .1244  | .05446      | .98452          | .06994           |  |
| .1244  | .05450      | .98450          | .07000           |  |
| .1246  | .05454      | .98448          | .07006           |  |
| . 1247 | .05457      | .98444          | .07013           |  |
| .1248  | .05461      | .98442          | .07019           |  |
| .1249  | .05465      | .98440          | .07025           |  |
| . 1250 | .05469      | .98438          | .07031           |  |

| P      | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |  |
|--------|------------------------|------------------|------------------|--|
| .1250  | .05469                 | .98438           | .07031           |  |
| .1251  | .05472                 | .98434           | .07038           |  |
| .1252  | .05476                 | .98432           | .07044           |  |
| .1253  | .05480                 | .98430           | .07050           |  |
| .1254  | .05484                 | .98428           | .07056           |  |
| .1255  | .05487                 | .98424           | .07063           |  |
| .1256  | .05491                 | .98422           | .07069           |  |
| .1257  | .05495                 | .98420           | .07075           |  |
| .1258  | .05499                 | .98418<br>.98414 | .07081           |  |
| .1260  | .05506                 | .98412           | .07094           |  |
| .1261  | .05510                 | .98410           | .07100           |  |
| .1262  | .05514                 | .98408           | .07106           |  |
| .1263  | .05517                 | .98404           | .07113           |  |
| .1264  | .05521                 | .98402           | .07119           |  |
| .1265  | .05525                 | .98400           | .07125           |  |
| .1266  | .05529                 | .98398           | .07131           |  |
| .1267  | .05532                 | .98394           | .07138           |  |
| .1268  | .05536                 | .98392           | .07144           |  |
| .1269  | .05540                 | .98390           | .07150           |  |
| .1270  | .05544                 | . 98388          | .07156           |  |
| .1271  | .05547                 | .983.84          | .07163           |  |
| .1272  | .05551                 | .98382<br>.98380 | .07169<br>.07175 |  |
| .1274  | .05558                 | .98376           | .07182           |  |
| .1275  | .05562                 | .98374           | .07188           |  |
| .1276  | .05566                 | .98372           | .07194           |  |
| .1277  | .05570                 | .98370           | .07200           |  |
| .1278  | .05573                 | .98366           | .07207           |  |
| .1279  | .05577                 | .98364           | .07213           |  |
| .1280  | .05581                 | .98362           | .07219           |  |
| .1281  | .05585                 | .98360           | .07225           |  |
| .1282  | .05588                 | .98356<br>.98354 | .07232           |  |
| . 1284 | .05596                 | .98352           | .07244           |  |
| .1285  | .05599                 | .98348           | .07244           |  |
| .1286  | .05603                 | .98346           | .07257           |  |
| .1287  | .05607                 | .98344           | .07263           |  |
| .1288  | .05611                 | .98342           | .07269           |  |
| .1289  | .05614                 | .98338           | .07276           |  |
| . 1290 | .05618                 | .98336           | .07282           |  |
| .1291  | .05622                 | .98334           | .07288           |  |
| .1292  | .05625                 | .98330           | .07295           |  |
| .1293  | .05633                 | .98326           | .07301           |  |
| .1294  | .05636                 | .98320           | .07307           |  |
| .1296  | .05640                 | .98320           | .07320           |  |
| .1297  | .05644                 | .98318           | .07326           |  |
| .1298  | .05648                 | .98316           | .07332           |  |
| .1299  | .05651                 | .98312           | .07339           |  |
| .1300  | .05655                 | .98310           | .07345           |  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | C-1              | <b>c</b> ₀<br>+ | <b>c</b> <sub>1</sub> + |
|--------|------------------|-----------------|-------------------------|
| .1300  | .05655           | .98310          | .07345                  |
| .1301  | .05659           | .98308          | .07351                  |
| .1302  | .05662           | .98304          | .07358                  |
| .1303  | .05666           | .98302          | .07364                  |
| .1304  | .05670           | .98300          | .07370                  |
| .1305  | .05673           | .98296          | .07377                  |
| .1306  | .05677           | .98294          | .07383                  |
| .1307  | .05681           | .98292          | .07389                  |
| .1308  | .05685           | .98290          | .07395                  |
| .1309  | .05688           | .98286          | .07402                  |
| . 1310 | .05692           | .98284          | .07408                  |
| .1311  | .05696           | .98282          | .07414                  |
| .1312  | .05699           | .98278          | .07421                  |
| .1313  | .05703           | .98276          | .07427                  |
| .1314  | .05707           | .98274          | .07433                  |
| .1315  | .05710           | .98270          | .07440                  |
| .1316  | .05714           | .98268          | .07446                  |
| .1317  | .05718<br>.05721 | .98266          | .07452                  |
| .1318  | .05721           | .98262          | .07459                  |
|        |                  |                 | +                       |
| .1320  | .05729           | .98258          | .07471                  |
| .1321  | .05732<br>.05736 | .98254          | .07478                  |
| .1323  | .05740           | .98250          | .07490                  |
| .1324  | .05744           | .98248          | .07496                  |
| .1324  | .05747           | .98244          | .07503                  |
| .1326  | .05751           | .98242          | .07509                  |
| .1327  | .05755           | .98240          | .07515                  |
| .1328  | .05758           | .98236          | .07522                  |
| .1329  | .05762           | . 98234         | .07528                  |
| .1330  | .05766           | .98232          | .07534                  |
| .1331  | .05769           | .98228          | .07541                  |
| .1332  | .05773           | .98226          | .07547                  |
| .1333  | .05777           | .98224          | .07553                  |
| .1334  | .05780           | .98220          | .07560                  |
| .1335  | .05784           | .98218          | .07566                  |
| . 1336 | .05788           | .98216          | .07572                  |
| .1337  | .05791           | .98212          | .07579                  |
| .1338  | .05795           | .98210          | .07585                  |
| .1339  | .05799           | .98208          | .07591                  |
| .1340  | .05802           | .98204          | .07598                  |
| .1341  | .05806           | .98202          | .07604                  |
| .1342  | .05810           | .98200          | .07610                  |
|        | 1                | 1               | .07623                  |
| .1344  | .05817           | .98194          | .07623                  |
| .1345  | .05824           | .98188          | .07636                  |
| .1347  | .05824           | .98186          | .07642                  |
| .1347  | .05828           | .98182          | .07649                  |
| .1346  | .05835           | .98180          | .07655                  |
| .1350  | .05839           | .98178          | .07661                  |

| p     | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|-------|------------------|------------------|-------------------------|
| .1350 | .05839           | .98178           | .07661                  |
| .1351 | .05842           | .98174           | .07668                  |
| .1352 | .05846           | .98172           | .07674                  |
| .1353 | .05850           | .98170           | .07680                  |
| .1354 | .05853           | .98166           | .07687                  |
| .1355 | .05857           | .98164           | .07693                  |
| .1356 | .05861           | .98162           | .07699                  |
| .1357 | .05864           | .98158           | .07706                  |
| .1358 | .05868           | .98156           | .07712                  |
| .1359 | .05872           | .98154           | .07718                  |
| .1360 | .05875           | .98150           | .07725                  |
| .1361 | .05879           | .98148           | .07731                  |
| .1362 | .05882<br>.05886 | .98144<br>.98142 | .07738                  |
|       |                  |                  | .07750                  |
| .1364 | .05890           | .98140<br>.98136 | .07757                  |
| .1366 | .05897           | .98134           | .07763                  |
| .1367 | .05901           | .98132           | .07769                  |
| .1368 | .05904           | .98128           | .07776                  |
| .1369 | .05908           | .98126           | .07782                  |
| .1370 | .05912           | .98124           | .07788                  |
| .1371 | .05915           | .98120           | .07795                  |
| .1372 | .05919           | .98118           | .07801                  |
| .1373 | .05922           | .98114           | .07808                  |
| .1374 | .05926           | .98112           | .07814                  |
| .1375 | .05930           | .98110           | .07820                  |
| .1376 | .05933           | .98106           | .07827                  |
| .1377 | .05937           | .98104<br>.98102 | .07833                  |
| .1379 | .05941           | .98098           | .07846                  |
| .1380 | .05948           | .98096           | .07852                  |
| .1381 | .05951           | .98092           | .07859                  |
| .1382 | .05955           | .98090           | .07865                  |
| .1383 | .05959           | .98088           | .07871                  |
| .1384 | .05962           | .98084           | .07878                  |
| .1385 | .05966           | .98082           | .07884                  |
| .1386 | .05970           | .98080           | .07890                  |
| .1387 | .05973           | .98076           | .07897                  |
| .1388 | .05977           | .98074           | .07903                  |
| .1390 | .05984           | .98068           | .07916                  |
| .1391 | .05988           | .98066           | .07922                  |
| .1392 | .05991           | .98062           | .07929                  |
| .1393 | .05995           | .98060           | .07935                  |
| .1394 | .05998           | .98056           | .07942                  |
| .1395 | .06002           | .98054           | .07948                  |
| .1396 | .06006           | .98052           | .07954                  |
| .1397 | .06009           | .98048           | .07961                  |
| .1398 | .06013           | .98046           | .07967                  |
| .1399 | .06016           | . 98042          | .07974                  |
| .1400 | .06020           | .98040           | .07980                  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> -1      | <b>c</b> ₀<br>+ | <b>c</b> <sub>1</sub> + |  |
|--------|------------------|-----------------|-------------------------|--|
| .1400  | .06020           | .98040          | .07980                  |  |
| .1401  | .06024           | . 98038         | .07986                  |  |
| .1402  | .06027           | .98034          | .07993                  |  |
| .1403  | .06031           | .98032          | .07999                  |  |
| .1404  | .06034           | .98028          | .08006                  |  |
| .1405  | .06038           | .98026          | .08012                  |  |
| .1406  | .06042           | .98024          | .08018                  |  |
| .1407  | .06045           | .98020          | .08025                  |  |
| .1408  | .06049           | .98018          | .08031                  |  |
| .1409  | .06052           | .98014          | .08038                  |  |
| .1410  | .06056           | .98012          | .08044                  |  |
| .1411  | .06060           | .98010          | .08050                  |  |
| .1412  | .06063           | .98006          | .08057                  |  |
| .1413  | .06067           | .98004          | .08063                  |  |
| .1414  | .06070           | .98000          | .08070                  |  |
| .1415  | .06074<br>.06077 | .97998          | .08076                  |  |
| .1417  | .06081           | .97992          | .08089                  |  |
| .1417  | .06085           | .97990          | .08095                  |  |
| .1419  | .06088           | .97986          | .08102                  |  |
| .1420  | .06092           | .97984          | .08108                  |  |
| .1421  | .06095           | .97980          | .08115                  |  |
| .1422  | .06099           | .97978          | .08121                  |  |
| .1423  | .06103           | .97976          | .08127                  |  |
| .1424  | .06106           | .97972          | .08134                  |  |
| .1425  | .06110           | .97970          | .08140                  |  |
| .1426  | .06113           | .97966          | .08147                  |  |
| .1427  | .06117           | .97964          | .08153                  |  |
| .1428  | .06120           | .97960          | .08160                  |  |
| .1429  | .06124           | .97958          | .08166                  |  |
| .1430  | .06128           | .97956          | .08172                  |  |
| . 1431 | .06131           | .97952          | .08179                  |  |
| .1432  | .06135           | .97950          | .08185                  |  |
|        | .06138           | .97946          | .08192                  |  |
| .1434  | .06142           | .97944          | .08198                  |  |
| .1435  | .06145           | .97940          | .08203                  |  |
| .1437  | .06149           | .97936          | .08217                  |  |
| .1438  | .06155           | .97930          | .08217                  |  |
| .1439  | .06160           | .97930          | .08230                  |  |
| .1440  | .06163           | .97926          | .08237                  |  |
| .1441  | .06167           | .97924          | .08243                  |  |
| .1442  | .06170           | .97920          | .08250                  |  |
| .1443  | .06174           | .97918          | .08256                  |  |
| .1444  | .06177           | .97914          | .08263                  |  |
| .1445  | .06181           | .97912          | .08269                  |  |
| .1446  | .06185           | .97910          | .08275                  |  |
| .1447  | .06188           | .97906          | .08282                  |  |
| .1448  | .06192           | .97904          | .08288                  |  |
| .1449  | .06195           | .97900          | .08295                  |  |
| .1450  | .06199           | .97898          | .08301                  |  |

| P      | C-1              | <b>c</b> ₀<br>+  | C <sub>1</sub> |
|--------|------------------|------------------|----------------|
| .1450  | .06199           | .97898           | .08301         |
| . 1451 | .06202           | .97894           | .08308         |
| .1452  | .06206           | .97892           | .08314         |
| .1453  | .06209           | .97888           | .08321         |
| .1454  | .06213           | .97886           | .08327         |
| .1455  | .06216           | .97882           | .08334         |
| .1456  | .06220           | .97880           | .08340         |
| .1457  | .06224           | .97878           | .08346         |
| .1458  | .06227           | .97874           | .08353         |
| .1459  | .06231           | .97872           | .08359         |
| .1460  | .06234           | .97868           | .08366         |
| .1461  | .06238           | .97866           | .08372         |
| .1462  | .06241           | .97862           | .08379         |
| 1      | .06245           | .97860           | .08385         |
| .1464  | .06248           | .97856           | .08392         |
| .1465  | .06252           | .97854<br>.97850 | .08398         |
| .1467  | .06259           | .97848           | .08411         |
| .1468  | .06262           | .97844           | .08411         |
| .1469  | .06266           | .97842           | .08424         |
| .1470  | .06270           | . 97840          | .08430         |
| .1471  | .06273           | .97836           | .08437         |
| .1472  | .06277           | .97834           | .08443         |
| .1473  | .06280           | .97830           | .08450         |
| .1474  | .06284           | .97828           | .08456         |
| .1475  | .06287<br>.06291 | .97824           | .08463         |
| .1477  | .06291           | .97822<br>.97818 | .08469         |
| .1478  | .06294           | .97816           | .08482         |
| .1479  | .06301           | .97812           | .08489         |
| .1480  | .06305           | .97810           | .08495         |
| .1481  | .06308           | .97806           | .08502         |
| .1482  | .06312           | .97804<br>.97800 | .08508         |
| .1483  | .06315           |                  | .08515         |
| .1484  | .06319           | .97798<br>.97794 | .08521         |
| .1486  | .06326           | .97792           | .08534         |
| .1487  | .06329           | .97788           | .08541         |
| .1488  | .06333           | .97786           | .08547         |
| .1489  | .06336           | .97782           | .08554         |
| .1490  | .06340           | .97780           | .08560         |
| .1491  | .06343           | .97776           | .08567         |
| .1492  | .06347           | .97774<br>.97770 | .08573         |
| .1494  | .06354           | .97768           | .08586         |
| .1495  | .06357           | .97764           | .08593         |
| .1496  | .06361           | .97762           | .08599         |
| . 1497 | .06364           | .97758           | .08606         |
| .1498  | .06368           | .97756           | .08612         |
| .1499  | .06371           | .97752           | .08619         |
| .1500  | .06375           | .97750           | .08625         |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | C-1      | c <sub>o</sub><br>+ | <b>C</b> 1 + |   | P              | C-1    | <b>c</b> ₀<br>+  | C <sub>1</sub> |
|--------|----------|---------------------|--------------|---|----------------|--------|------------------|----------------|
| .1500  | .06375   | .97750              | . 08625      |   | .1550          | .06549 | .97598           | .08951         |
| .1501  | .06378   | .97746              | .08632       |   | .1551          | .06552 | .97594           | .08958         |
| .1502  | .06382   | .97744              | .08638       |   | .1552          | .06556 | .97592           | .08964         |
| .1503  | .06385   | .97740              | .08645       |   | .1553          | .06559 | .97588           | .08971         |
| .1504  | .06389   | .97738              | .08651       |   | .1554          | .06563 | .97586           | .08977         |
| .1505  | .06392   | .97734              | .08658       |   | .1555          | .06566 | .97582           | .08984         |
| .1506  | .06396   | .97732              | .08664       |   | .1556          | .06569 | .97578           | .08991         |
| .1507  | .06399   | .97728              | .08671       |   | .1557          | .06573 | .97576           | .08997         |
| .1508  | .06403   | .97726              | .08677       |   | .1558          | .06576 | .97572           | .09004         |
| .1509  | .06406   | .97722              | .08684       | i | .1559          | .06580 | .97570           | .09010         |
| .1510  | .06410   | .97720              | .08690       |   | .1560          | .06583 | .97566           | .09017         |
| .1511  | .06413   | .97716              | .08697       |   | .1561          | .06587 | .97564           | .09023         |
| .1512  | .06417   | .97714              | .08703       |   | .1562          | .06590 | .97560           | .09030         |
| .1513  | .06420   | .97710              | .08710       |   | .1563          | .06594 | .97558           | .09036         |
| .1514  | .06424   | .97708              | .08716       |   | .1564          | .06597 | .97554           | .09043         |
| .1515  | .06427   | .97704              | .08723       |   | .1565          | .06600 | .97550           | .09050         |
| .1516  | .06431   | .97702              | .08729       |   | .1566          | .06604 | .97548           | .09056         |
| .1517  | .06434   | .97698              | .08736       |   | .1567          | .06607 | .97544           | .09063         |
| . 1518 | .06438   | .97696              | .08742       |   | .1568          | .06611 | .97542           | .09069         |
| .1519  | .06441   | .97692              | .08749       |   | .1569          | .06614 | .97538           | .09076         |
| .1520  | .06445   | .97690              | .08755       |   | .1570          | .06618 | .97536           | .09082         |
| .1521  | .06448   | .97686              | .08762       |   | .1571<br>.1572 | .06621 | .97532           | .09089         |
| .1522  | .06452   | .97684              | .08768       |   | .1573          | .06628 | .97528           | .09096         |
| 1      |          | i                   | .08781       |   | .1574          | .06631 | 1                | .09102         |
| .1524  | .06459   | .97678              | .08788       |   | .1575          | .06635 | .97522<br>.97520 | .09109         |
| .1526  | .06466   | .97672              | .08794       |   | .1576          | .06638 | .97516           | .09122         |
| .1527  | .06469   | .97668              | .08801       |   | .1577          | .06642 | .97514           | .09128         |
| .1528  | .06473   | .97666              | .08807       |   | .1578          | .06645 | .97514           | .09126         |
| .1529  | .06476   | .97662              | .08814       |   | .1579          | .06648 | .97506           | .09142         |
| .1530  | .06480   | .97660              | .08820       |   | .1580          | .06652 | .97504           | .09148         |
| .1531  | .06483   | .97656              | .08827       | 1 | .1581          | .06655 | .97500           | .09155         |
| .1532  | .06486   | .97652              | .08834       |   | .1582          | .06659 | .97498           | .09161         |
| .1533  | .06490   | .97650              | .08840       |   | .1583          | .06662 | .97494           | .09168         |
| .1534  | .06493   | .97646              | .08847       |   | .1584          | .06665 | .97490           | .09175         |
| .1535  | .06497   | . 97644             | .08853       |   | .1585          | .06669 | .97488           | .09181         |
| .1536  | .06500   | .97640              | .08860       |   | .1586          | .06672 | .97484           | .09188         |
| .1537  | .06504   | .97638              | .08866       |   | .1587          | .06676 | .97482           | .09194         |
| .1538  | .06507   | .97634              | .08873       |   | .1588          | .06679 | .97478           | .09201         |
| .1539  | .06511   | .97632              | .08879       |   | .1589          | .06683 | .97476           | .09207         |
| . 1540 | .06514   | .97628              | .08886       |   | .1590          | .06686 | .97472           | .09214         |
| .1541  | .06518   | .97626              | .08892       |   | .1591          | .06689 | .97468           | .09221         |
| .1542  | .06521   | .97622              | .08899       |   | .1592          | .06693 | .97466           | .09227         |
| .1543  | .06525   | .97620              | .08905       |   | .1593          | .06696 | .97462<br>.97460 | .09234         |
| .1544  | .06531   | .97612              | .08912       | 1 | .1594          | .06703 | .97456           | .09240         |
| .1545  | .06535   | .97612              | .08925       | 1 | .1596          | .06706 | .97452           | .09254         |
| 1      | .06538   | .97606              | .08932       | 1 | .1597          | .06710 | .97450           | .09260         |
| .1547  | .06542   | .97604              | .08932       |   | .1598          | .06713 | .97446           | .09267         |
| .1549  | .06545   | .97600              | .08945       |   | .1599          | .06717 | .97444           | .09273         |
| .1550  | .06549   | .97598              | .08951       |   | .1600          | .06720 | .97440           | .09280         |
|        | 1,000,00 | 1                   | 1            | J |                |        | 1                |                |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|--------|------------------|------------------|--------------|
| .1600  | .06720           | .97440           | .09280       |
| .1601  | .06723           | .97436           | .09287       |
| .1602  | .06727           | .97434           | .09293       |
| .1603  | .06730           | .97430           | .09300       |
| .1604  | .06734           | .97428           | .09306       |
| .1605  | .06737           | .97424           | .09313       |
| .1606  | .06740           | .97420           | .09320       |
| .1607  | .06744           | .97418           | .09326       |
| .1608  | .06747           | .97414           | .09333       |
| .1609  | .06751           | .97412           | .09339       |
| .1610  | .06754           | .97408           | .09346       |
| .1611  | .06757           | .97404           | .09353       |
| . 1612 | .06761           | .97402           | .09359       |
| .1613  | .06764           | .97398           | .09366       |
| .1614  | .06768           | .97396           | .09372       |
| .1615  | .06771           | .97392           | .09379       |
| .1616  | .06774           | .97388           | .09386       |
| .1617  | .06778           | .97386           | .09392       |
| .1618  | .06781           | .97382           | .09399       |
| .1619  | .06784           | .97378           | .09406       |
| .1620  | .06788           | .97376           | .09412       |
| .1621  | .06791           | .97372           | .09419       |
| .1622  | .06795           | .97370<br>.97366 | .09425       |
|        |                  |                  |              |
| .1624  | .06801<br>.06805 | .97362<br>.97360 | .09439       |
| .1626  | .06808           | .97356           | .09452       |
| .1627  | .06811           | .97352           | .09459       |
| .1628  | .06815           | .97350           | .09459       |
| .1629  | .06818           | .97346           | .09472       |
| .1630  | .06822           | .97344           | .09478       |
| .1631  | .06825           | .97340           | .09485       |
| .1632  | .06828           | .97336           | .09492       |
| .1633  | .06832           | .97334           | .09498       |
| .1634  | .06835           | .97330           | .09505       |
| .1635  | .06838           | .97326           | .09512       |
| .1636  | .06842           | .97324           | .09518       |
| .1637  | .06845           | .97320           | .09525       |
| .1638  | .06848           | .97316           | .09532       |
| .1639  | .06852           | .97314           | .09538       |
| .1640  | .06855           | .97310           | .09545       |
| .1641  | .06859           | .97308           | .09551       |
| .1642  | .06862           | .97304           | .09558       |
| .1644  | .06869           | .97298           | .09571       |
| .1645  | .06872           | .97294           | .09578       |
| . 1646 | .06875           | .97290           | .09585       |
| .1647  | .06879           | .97288           | .09591       |
| .1648  | .06882           | .97284           | .09598       |
| .1649  | .06885           | .97280           | .09605       |
| . 1650 | .06889           | .97278           | .09611       |

| P              | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|----------------|------------------------|------------------|--------------|
| .1650          | .06889                 | .97278           | .09611       |
| .1651          | .06892                 | .97274           | .09618       |
| .1652          | .06895                 | .97270           | .09625       |
| .1653          | .06899                 | .97268           | .09631       |
| .1654          | .06902                 | .97264           | .09638       |
| .1655          | .06905                 | .97260           | .09645       |
| .1656          | .06909                 | .97258           | .09651       |
| .1657          | .06912                 | .97254           | .09658       |
| .1658          | .06916                 | .97252           | .09664       |
| .1659          | .06919                 | .97248           | .09671       |
| .1660          | .06922                 | .97244           | .09678       |
| .1661          | .06926                 | .97242           | .09684       |
| .1662          | .06929                 | .97238<br>.97234 | .09691       |
|                |                        |                  | -            |
| .1664          | .06936                 | .97232<br>.97228 | .09704       |
| .1666          | .06942                 | .97224           | .09718       |
| .1667          | .06946                 | .97222           | .09724       |
| .1668          | .06949                 | .97218           | .09731       |
| .1669          | .06952                 | .97214           | .09738       |
| .1670          | .06956                 | .97212           | .09744       |
| .1671          | .06959                 | .97208           | .09751       |
| .1672          | .06962                 | .97204           | .09758       |
| .1673          | .06966                 | .97202           | .09764       |
| .1674          | .06969                 | .97198           | .09771       |
| .1675          | .06972                 | .97194<br>.97192 | .09778       |
| .1677          | .06979                 | .97188           | .09791       |
| .1678          | .06982                 | .97184           | .09798       |
| .1679          | .06985                 | .97180           | .09805       |
| .1680          | .06989                 | .97178           | .09811       |
| .1681          | .06992                 | .97174           | .09818       |
| .1682          | .06995                 | .97170           | .09825       |
| .1683          | .06999                 | .97168           | .09831       |
| .1684          | .07002                 | .97164           | .09838       |
| .1685          | .07005                 | .97160           | .09845       |
| .1686          | .07009                 | .97158           | .09851       |
| .1687<br>.1688 | .07012                 | .97154<br>.97150 | .09858       |
| .1689          | .07013                 | .97130           | .09865       |
| .1690          | .07022                 | .97144           | .09878       |
| .1691          | .07025                 | .97140           | .09885       |
| .1692          | .07029                 | .97138           | .09891       |
| .1693          | .07032                 | .97134           | .09898       |
| .1694          | .07035                 | .97130           | .09905       |
| .1695          | .07038                 | .97126           | .09912       |
| .1696          | .07042                 | .97124           | .09918       |
| .1697          | .07045                 | .97120           | .09925       |
| .1698<br>.1699 | .07048                 | .97116<br>.97114 | .09932       |
| .1700          | .07052                 |                  | <del> </del> |
| .1700          | •01022                 | .97110           | .09945       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | C-1    | ¢<br>+           | <b>c</b> <sub>1</sub> + |                      | P      | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+ | <b>C</b> 1 + |
|--------|--------|------------------|-------------------------|----------------------|--------|------------------------|-----------------|--------------|
| .1700  | .07055 | .97110           | .09945                  |                      | .1750  | .07219                 | .96938          | .10281       |
| .1701  | .07058 | .97106           | .09952                  |                      | .1751  | .07222                 | .96934          | .10288       |
| .1702  | .07062 | .97104           | .09958                  |                      | . 1752 | .07225                 | .96930          | .10295       |
| .1703  | .07065 | .97100           | .09965                  |                      | .1753  | .07228                 | .96926          | .10302       |
| .1704  | .07068 | .97096           | .09972                  |                      | .1754  | .07232                 | .96924          | .10308       |
| .1705  | .07071 | .97092           | .09979                  |                      | .1755  | .07235                 | .96920          | . 10315      |
| .1706  | .07075 | .97090           | .09985                  |                      | .1756  | .07238                 | .96916          | . 10322      |
| . 1707 | .07078 | .97086           | .09992                  |                      | . 1757 | .07241                 | .96912          | .10329       |
| .1708  | .07081 | .97082           | .09999                  |                      | . 1758 | .07245                 | .96910          | .10335       |
| .1709  | .07085 | .97080           | .10005                  |                      | .1759  | .07248                 | .96906          | .10342       |
| .1710  | .07088 | .97076           | .10012                  |                      | .1760  | .07251                 | .96902          | .10349       |
| .1711  | .07091 | .97072           | .10019                  |                      | .1761  | .07254                 | .96898          | .10356       |
| .1712  | .07095 | .97070           | .10025                  |                      | .1762  | .07258                 | .96896          | .10362       |
| .1713  | .07098 | .97066           | .10032                  |                      | .1763  | .07261                 | .96892          | .10369       |
| .1714  | .07101 | .97062<br>.97058 | .10039                  |                      | .1764  | .07264                 | .96888          | .10376       |
| .1716  | .07104 | .97056           | .10046                  |                      | .1766  | .07267                 | .96882          | .10389       |
| .1717  | .07111 | .97052           | .10052                  |                      | .1767  | .07274                 | .96878          | .10396       |
| .1718  | .07114 | .97048           | .10039                  |                      | .1768  | .07277                 | .96874          | .10403       |
| .1719  | .07118 | .97046           | .10072                  |                      | .1769  | .07280                 | .96870          | .10410       |
| . 1720 | .07121 | .97042           | .10079                  |                      | .1770  | .07284                 | .96868          | .10416       |
| .1721  | .07124 | .97038           | .10086                  |                      | . 1771 | .07287                 | .96864          | .10423       |
| .1722  | .07127 | .97034           | .10093                  |                      | .1772  | .07290                 | .96860          | .10430       |
| .1723  | .07131 | .97032           | .10099                  |                      | .1773  | .07293                 | .96856          | . 10437      |
| . 1724 | .07134 | .97028           | .10106                  |                      | . 1774 | .07296                 | .96852          | .10444       |
| .1725  | .07137 | .97024           | . 10113                 |                      | .1775  | .07300                 | .96850          | .10450       |
| .1726  | .07140 | .97020           | . 10120                 |                      | .1776  | .07303                 | .96846          | . 10457      |
| .1727  | .07144 | .97018           | .10126                  |                      | .1777  | .07306                 | .96842          | .10464       |
| .1728  | .07147 | .97014           | .10133                  |                      | .1778  | .07309                 | .96838          | .10471       |
| .1729  | .07150 | .97010           | .10140                  |                      | .1779  | .07313                 | .96836          | .10477       |
| .1730  | .07154 | .97008           | .10146                  | -                    | .1780  | .07316                 | .96832          | .10484       |
| .1731  | .07157 | .97004           | .10153                  |                      | .1781  | .07319                 | .96828          | .10491       |
| .1732  | .07160 | .97000           | .10160                  |                      | .1783  | .07322                 | .96820          | .10505       |
| .1734  |        | .96994           | . 10173                 |                      | .1784  | .07329                 | .96818          | .10511       |
| .1735  | .07167 | .96994           | .10173                  |                      | .1785  | .07329                 | .96814          | .10518       |
| .1736  | .07173 | .96986           | . 10187                 |                      | .1786  | .07335                 | .96810          | .10525       |
| .1737  | .07176 | .96982           | .10194                  |                      | .1787  | .07338                 | .96806          | .10532       |
| .1738  | .07180 | .96980           | .10200                  |                      | .1788  | .07342                 | .96804          | .10538       |
| .1739  | .07183 | .96976           | .10207                  |                      | .1789  | .07345                 | .96800          | . 10545      |
| .1740  | .07186 | .96972           | .10214                  |                      | .1790  | .07348                 | .96796          | .10552       |
| . 1741 | .07189 | .96968           | .10221                  |                      | .1791  | .07351                 | .96792          | .10559       |
| .1742  | .07193 | .96966           | . 10227                 |                      | .1792  | .07354                 | .96788          | .10566       |
| .1743  | .07196 | .96962           | .10234                  |                      | .1793  | .07358                 | .96786          | .10572       |
| .1744  | .07199 | .96958           | .10241                  |                      | .1794  | .07361                 | .96782          | .10579       |
| .1745  | .07202 | .96954           | .10248                  |                      | .1795  | .07364                 | .96778          | .10586       |
| .1746  | .07206 | .96952           | .10254                  |                      | 1      | 1                      | 1               | .10600       |
| .1747  | .07209 | .96948           | .10261                  |                      | .1797  | .07370                 | .96770          | .10600       |
| .1748  | .07212 | .96944           | .10208                  |                      | .1799  | .07377                 | .96764          | .10613       |
| .1750  | .07219 | .96938           | .10281                  | 1                    | .1800  | .07380                 | .96760          | .10620       |
| .1730  | .01219 | • 20330          | 110201                  | <b>j</b><br>Page 155 |        | 1                      | ., ., 0, 00     | 1 1 20020    |
|        |        |                  |                         | //                   | •      |                        |                 |              |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p                | C-1<br>- | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|------------------|----------|------------------|--------------|
| .1800            | .07380   | .96760           | .10620       |
| .1801            | .07383   | .96756           | .10627       |
| .1802            | .07386   | .96752           | .10634       |
| .1803            | .07390   | .96750           | .10640       |
| .1804            | .07393   | .96746           | .10647       |
| .1805            | .07396   | .96742           | .10654       |
| .1806            | .07399   | .96738           | .10661       |
| .1807            | .07402   | .96734           | .10668       |
| .1808            | .07406   | .96732<br>.96728 | .10674       |
|                  |          |                  | <del> </del> |
| .1810            | .07412   | .96724           | .10688       |
| .1811            | .07413   | .96716           | .10093       |
| .1813            | .07422   | .96714           | .10708       |
| .1814            | .07425   | .96710           | .10715       |
| .1815            | .07428   | .96706           | .10722       |
| .1816            | .07431   | .96702           | .10729       |
| .1817            | .07434   | .96698           | .10736       |
| .1818            | .07437   | .96694           | .10743       |
| .1819            | .07441   | .96692           | .10749       |
| .1820            | .07444   | .96688           | .10756       |
| .1821            | .07447   | .96684           | .10763       |
| .1822            | .07450   | .96680           | .10770       |
| .1823            | .07453   | .96676           | .10777       |
| .1824            | .07457   | .96674           | .10783       |
| . 1826           | .07463   | .96666           | .10797       |
| . 1827           | .07466   | .96662           | .10804       |
| . 1828           | .07469   | .96658           | .10811       |
| . 1829           | .07472   | .96654           | .10818       |
| . 1830           | .07476   | .96652           | .10824       |
| .1831            | .07479   | .96648           | .10831       |
| . 1832           | .07482   | .96644           | .10838       |
| . 1833           | .07485   | .96640           | .10845       |
| . 1834           | .07488   | .96636           | .10852       |
| .1835            | .07491   | .96632           | .10859       |
|                  | .07498   | .96626           | .10863       |
| . 1837<br>. 1838 | .07498   | .96622           | .10872       |
| . 1839           | .07504   | .96618           | .10886       |
| . 1840           | .07507   | .96614           | .10893       |
| .1841            | .07510   | .96610           | .10900       |
| .1842            | .07514   | .96608           | .10906       |
| .1843            | .07517   | .96604           | .10913       |
| . 1844           | .07520   | .96600           | .10920       |
| .1845            | .07523   | .96596           | .10927       |
| .1846            | .07526   | .96592           | .10934       |
| .1847            | .07529   | .96588           | .10941       |
| .1849            | .07536   | .96582           | .10946       |
| . 1850           | .07539   | .96578           | .10961       |

| P              | C-1              | <b>c</b> ₀<br>+  | C <sub>1</sub> + |
|----------------|------------------|------------------|------------------|
| .1850          | .07539           | .96578           | .10961           |
| .1851          | .07542           | .96574           | .10968           |
| .1852          | .07545           | .96570           | .10975           |
| .1853          | .07548           | .96566           | .10982           |
| .1854          | .07551           | .96562           | .10989           |
| .1855          | .07554           | .96558           | .10996           |
| .1856          | .07558           | .96556           | .11002           |
| .1857          | .07561           | .96552           | .11009           |
| .1858          | .07564           | .96548           | .11016           |
| .1859          | .07567           | .96544           | .11023           |
| .1860          | .07570           | .96540           | .11030           |
| .1861          | .07573           | .96536           | .11037           |
| .1862          | .07576           | .96532           | .11044           |
| .1863          | .07580           | .96530           | .11050           |
| .1864          | .07583           | .96526           | .11057           |
| .1865          | .07586           | .96522<br>.96518 | .11064           |
| .1866<br>.1867 |                  | .96514           |                  |
| .1868          | .07592<br>.07595 | .96514           | .11078           |
| .1869          | .07598           | .96506           | .11065           |
| .1870          | .07602           | .96504           | .11098           |
| .1871          | .07605           | .96500           | .11105           |
| .1872          | .07608           | .96496           | .11112           |
| .1873          | .07611           | .96492           | .11119           |
| . 1874         | .07614           | .96488           | .11126           |
| .1875          | .07617           | .96484           | .11133           |
| .1876          | .07620           | .96480           | .11140           |
| . 1877         | .07623           | .96476           | .11147           |
| . 1878         | .07627           | .96474           | .11153           |
| . 1879         | .07630           | .96470           | .11160           |
| . 1880         | .07633           | .96466           | .11167           |
| .1881          | .07636           | .96462           | .11174           |
| . 1882         | .07639           | .96458           | .11181           |
| .1883          | .07642           | .96454           | .11188           |
| . 1884         | .07645           | .96450           | .11195           |
| .1885          | .07648           | .96446           | .11202           |
| i              | 1                | 1                | 1                |
| .1887<br>.1888 | .07655           | .96440           | .11215           |
| .1889          | .07661           | .96430           | .11222           |
| .1890          | .07664           | .96428           | .11236           |
| .1891          | .07667           | .96424           | .11243           |
| .1892          | .07670           | .96420           | .11250           |
| . 1893         | .07673           | .96416           | .11257           |
| . 1894         | .07676           | .96412           | .11264           |
| .1895          | .07679           | .96408           | .11271           |
| . 1896         | .07683           | .96406           | .11277           |
| . 1897         | .07686           | .96402           | .11284           |
| . 1898         | .07689           | .96398           | .11291           |
| . 1899         | .07692           | .96394           | .11298           |
| .1900          | .07695           | .96390           | .11305           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | C-1    | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|--------|--------|------------------|-------------------------|
| .1900  | .07695 | .96390           | .11305                  |
| . 1901 | .07698 | .96386           | .11312                  |
| .1902  | .07701 | .96382           | .11319                  |
| .1903  | .07704 | .96378           | .11326                  |
| .1904  | .07707 | .96374           | .11333                  |
| .1905  | .07710 | .96370           | .11340                  |
| .1906  | .07714 | .96368           | .11346                  |
| .1907  | .07717 | .96364           | .11353                  |
| .1908  | .07720 | .96360           | .11360                  |
| .1909  | .07723 | .96356           | .11367                  |
| . 1910 | .07726 | .96352           | .11374                  |
| .1911  | .07729 | .96348           | .11381                  |
| .1912  | .07732 | .96344           | .11388                  |
| .1913  | .07735 | .96340           | .11395                  |
| .1914  | .07738 | .96336           | .11402                  |
| .1915  | .07741 | .96332<br>.96328 | .11409                  |
| 1      | 1      |                  | : 1                     |
| .1917  | .07748 | .96326           | .11422                  |
| . 1919 | .07754 | .96318           | .11429                  |
| .1920  | .07757 | .96314           | .11443                  |
| .1921  | .07760 | .96310           | .11450                  |
| .1922  | .07763 | .96306           | .11457                  |
| .1923  | .07766 | .96302           | .11464                  |
| .1924  | .07769 | .96298           | .11471                  |
| . 1925 | .07772 | .96294           | .11478                  |
| .1926  | .07775 | .96290           | .11485                  |
| . 1927 | .07778 | .96286           | .11492                  |
| .1928  | .07781 | .96282           | .11499                  |
| . 1929 | .07784 | .96278           | .11506                  |
| .1930  | .07788 | .96276           | .11512                  |
| .1931  | .07791 | .96272           | .11519                  |
| .1932  | .07794 | .96268           | .11526                  |
| .1933  | .07797 | .96264           | .11533                  |
| .1934  | .07800 | .96260           | .11540                  |
| .1936  | .07806 | .96252           | .11554                  |
| .1937  | .07809 | .96248           | .11561                  |
| .1938  | .07812 | .96244           | .11568                  |
| 1939   | .07815 | .96240           | .11575                  |
| .1940  | .07818 | .96236           | .11582                  |
| .1941  | .07821 | .96232           | .11589                  |
| . 1942 | .07824 | .96228           | .11596                  |
| . 1943 | .07827 | .96224           | .11603                  |
| .1944  | .07830 | .96220           | .11610                  |
| . 1945 | .07833 | .96216           | .11617                  |
|        | 1      | .96214           | .11630                  |
| .1947  | .07840 | .96210           | .11637                  |
| .1946  | .07846 | .96202           | .11644                  |
| .1950  | .07849 | .96198           | .11651                  |
| 1730   | .01049 | . 70170          |                         |

| P              | C-1    | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|----------------|--------|------------------|--------------|
| .1950          | .07849 | .96198           | .11651       |
| .1951          | .07852 | .96194           | .11658       |
| .1952          | .07855 | .96190           | .11665       |
| .1953          | .07858 | .96186           | .11672       |
| .1954          | .07861 | .96182           | .11679       |
| . 1955         | .07864 | .96178           | .11686       |
| .1956          | .07867 | .96174           | .11693       |
| .1957          | .07870 | .96170           | .11700       |
| .1958<br>.1959 | .07873 | .96166<br>.96162 | .11707       |
| .1960          | .07879 | .96158           | .11721       |
| .1961          | .07882 |                  |              |
| .1962          | .07885 | .96154<br>.96150 | .11728       |
| .1963          | .07888 | .96146           | .11742       |
| .1964          | .07891 | .96142           | .11749       |
| .1965          | .07894 | .96138           | .11756       |
| . 1966         | .07897 | .96134           | .11763       |
| . 1967         | .07900 | .96130           | .11770       |
| .1968          | .07903 | .96126           | .11777       |
| .1969          | .07907 | .96124           | .11783       |
| . 1970         | .07910 | .96120           | .11790       |
| .1971          | .07913 | .96116           | .11797       |
| .1972          | .07916 | .96112<br>.96108 | .11804       |
| .1974          | .07922 | .96104           | .11818       |
| .1974          | .07925 | .96104           | .11825       |
| .1976          | .07928 | .96096           | .11832       |
| . 1977         | .07931 | .96092           | .11839       |
| .1978          | .07934 | .96088           | .11846       |
| .1979          | .07937 | .96084           | .11853       |
| .1980          | .07940 | .96080           | .11860       |
| .1981          | .07943 | .96076           | .11867       |
| . 1982         | .07946 | .96072           | .11874       |
| .1983          | .07949 | .96068           | .11881       |
| .1984          | .07952 | .96064<br>.96060 | .11888       |
| .1986          | .07958 | .96056           | .11902       |
| .1987          | .07961 | .96052           | .11909       |
| .1988          | .07964 | .96048           | .11916       |
| . 1989         | .07967 | .96044           | .11923       |
| . 1990         | .07970 | .96040           | .11930       |
| . 1991         | .07973 | .96036           | .11937       |
| .1992          | .07976 | .96032           | .11944       |
| . 1993         | .07979 | .96028           | .11951       |
| .1994          | .07982 | .96024<br>.96020 | .11958       |
| .1995          | .07988 | .96020           | .11965       |
| .1997          | .07991 | .96012           | .11979       |
| .1998          | .07994 | .96008           | .11986       |
| .1999          | .07997 | .96004           | .11993       |
| . 2000         | .08000 | .96000           | .12000       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p              | C-1              | <b>c</b> ₀<br>+  | C <sub>1</sub> + |     |
|----------------|------------------|------------------|------------------|-----|
| .2000          | .08000           | .96000           | .12000           |     |
| .2001          | .08003           | .95996           | .12007           |     |
| .2002          | .08006           | .95992           | .12014           |     |
| .2003          | .08009           | .95988           | .12021           |     |
| . 2004         | .08012           | .95984           | .12028           |     |
| .2005          | .08015           | .95980           | .12035           |     |
| .2006          | .08018           | .95976           | .12042           |     |
| .2007          | .08021           | .95972           | . 12049          |     |
| .2008<br>.2009 | .08024           | .95968<br>.95964 | .12056           |     |
|                |                  |                  |                  | }   |
| . 2010         | .08030           | .95960           | .12070           |     |
| .2011          | .08033           | .95956           | .12077           |     |
| .2012          | .08036           | .95952           | .12084           |     |
| .2013          | .08039           | .95948           | 1                | 1   |
| .2014          | .08042           | .95944<br>.95940 | .12098           |     |
| .2015<br>.2016 | .08048           | .95936           | .12105           |     |
| . 2017         | .08051           | .95932           | .12112           |     |
| .2018          | .08054           | .95928           | .12126           |     |
| .2019          | .08057           | .95924           | . 12133          |     |
| . 2020         | .08060           | .95920           | .12140           |     |
| .2021          | .08063           | .95916           | .12147           |     |
| .2022          | .08066           | . 959 12         | .12154           |     |
| .2023          | .08069           | .95908           | .12161           |     |
| .2024          | .08072           | .95904           | .12168           |     |
| .2025          | .08075<br>.08078 | .95900<br>.95896 | .12175           |     |
| . 2027         | .08081           | .95892           | . 12189          |     |
| . 2028         | .08084           | .95888           | .12196           |     |
| .2029          | .08087           | .95884           | .12203           |     |
| . 2030         | .08090           | .95880           | .12210           |     |
| .2031          | .08093           | .95876           | .12217           | 1 [ |
| .2032          | .08095           | .95870           | .12225           |     |
| . 2033         | .08098           | .95866           | .12232           |     |
| .2034          | .08101           | .95862           | . 12239          |     |
| .2035          | .08104           | .95858           | .12246           | 1   |
| . 2036         | .08107           | .95854           | .12253           |     |
| . 2037         | .08110           | .95850           | .12260           |     |
| .2038          | .08113           | .95846           | .12267           |     |
| .2040          | .08119           | .95838           | .12281           | 1   |
| . 2041         | .08122           | .95834           | .12288           | 1 1 |
| 2042           | .08125           | .95830           | .12295           |     |
| . 2043         | .08128           | .95826           | .12302           |     |
| .2044          | .08131           | .95822           | .12309           |     |
| .2045          | .08134           | .95818           | .12316           |     |
| .2046          | .08137           | .95814           | .12323           |     |
| . 2047         | .08140           | .95810           | .12330           |     |
| .2048          | .08143           | .95806           | .12337           |     |
| . 2049         | .08146           | .95802           | .12344           |     |
| . 2050         | .08149           | .95798           | .12351           | l   |

| P      | <b>C</b> -1 | <b>c</b> <sub>0</sub> + | <b>C</b> ւ<br>+ |
|--------|-------------|-------------------------|-----------------|
| . 2050 | .08149      | .95798                  | .12351          |
| .2051  | .08152      | .95794                  | .12358          |
| . 2052 | .08155      | .95790                  | .12365          |
| .2053  | .08158      | .95786                  | .12372          |
| .2054  | .08161      | .95782                  | .12379          |
| .2055  | .08163      | .95776                  | .12387          |
| .2056  | .08166      | .95772                  | .12394          |
| . 2057 | .08169      | .95768                  | .12401          |
| . 2058 | .08172      | .95764                  | .12408          |
| . 2059 | .08175      | .95760                  | .12415          |
| .2060  | .08178      | .95756                  | .12422          |
| . 2061 | .08181      | .95752                  | . 12429         |
| .2062  | .08184      | .95748                  | .12436          |
| .2063  | .08187      | .95744                  | .12443          |
| .2064  | .08190      | .95740                  | .12450          |
| .2065  | .08193      | .95736<br>.95732        | .12457          |
| .2067  | .08199      | .95728                  | .12471          |
| .2068  | .08202      | .95724                  | .12478          |
| .2069  | .08205      | .95720                  | .12485          |
| .2070  | .08208      | .95716                  | .12492          |
| .2071  | .08210      | .95710                  | .12500          |
| .2072  | .08213      | .95706                  | .12507          |
| .2073  | .08216      | .95702                  | .12514          |
| .2074  | .08219      | .95698                  | .12521          |
| .2075  | .08222      | .95694<br>.95690        | .12528          |
| .2077  | .08228      | .95686                  | .12542          |
| .2078  | .08231      | .95682                  | .12542          |
| .2079  | .08234      | .95678                  | .12556          |
| . 2080 | .08237      | .95674                  | . 12563         |
| .2081  | .08240      | .95670                  | .12570          |
| .2082  | .08243      | .95666                  | .12577          |
| . 2083 | .08246      | .95662                  | .12584          |
| .2084  | .08248      | .95656                  | .12592          |
| .2085  | .08251      | .95652                  | .12599          |
| .2086  | .08254      | .95648                  | .12606          |
| .2087  | .08257      | .95644                  | .12613          |
| .2088  | .08260      | .95640<br>.95636        | .12620          |
| .2099  | .08266      | .95632                  | .12634          |
| .2091  | .08269      | .95628                  | . 12641         |
| .2092  | .08272      | .95624                  | .12648          |
| . 2093 | .08275      | .95620                  | .12655          |
| . 2094 | .08278      | .95616                  | .12662          |
| . 2095 | .08280      | .95610                  | .12670          |
| .2096  | .08283      | .95606                  | .12677          |
| . 2097 | .08286      | .95602                  | .12684          |
| . 2098 | .08289      | .95598                  | .12691          |
| . 2099 | .08292      | .95594                  | .12698          |
| .2100  | .08295      | .95590                  | .12705          |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

**C**1 +

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.13413

.13420

| p     | C-1      | <b>c</b> ₀<br>+  | <b>C</b> 1 + |   | p      | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+ |
|-------|----------|------------------|--------------|---|--------|------------------------|-----------------|
| .210  | 0 .08295 | .95590           | .12705       |   | .2150  | .08439                 | .95378          |
| .210  |          | .95586           | .12712       |   | .2151  | .08442                 | .95374          |
| .210  |          | .95582           | .12719       |   | .2152  | .08444                 | .95368          |
| .210  | 3 .08304 | .95578           | .12726       |   | .2153  | .08447                 | .95364          |
| .210  |          | .95574           | .12733       |   | .2154  | .08450                 | .95360          |
| .210  |          | .95568           | .12741       |   | .2155  | .08453                 | .95356          |
| .210  | 1        | .95564           | .12748       |   | .2156  | .08456                 | .95352          |
| .210  |          | .95560           | .12755       |   | .2157  | .08459                 | .95348          |
| .210  |          | .95556           | . 12762      |   | .2158  | .08462                 | .95344          |
| .210  | 9 .08321 | .95552           | .12769       |   | .2159  | .08464                 | .95338          |
| .211  |          | .95548           | .12776       |   | . 2160 | .08467                 | .95334          |
| .211  |          | .95544           | .12783       |   | .2161  | .08470                 | .95330          |
| .211  |          | .95540           | .12790       |   | .2162  | .08473                 | .95326          |
|       |          | .95536           | .12797       |   | .2163  | .08476                 | .95322          |
| .211  |          | .95532<br>.95526 | .12804       |   | .2164  | .08479                 | .95318          |
| .211  |          | .95522           | .12819       |   | .2166  | .08484                 | .95308          |
| .211  | 1        | .95518           | .12826       |   | .2167  | .08487                 | .95304          |
| 211   | l l      | .95514           | .12833       |   | .2168  | .08490                 | .95300          |
| .211  | · ·      | .95510           | .12840       |   | .2169  | .08493                 | .95296          |
| .212  | 0 .08353 | .95506           | .12847       |   | .2170  | .08496                 | .95292          |
| .212  | 1 .08356 | .95502           | .12854       |   | .2171  | .08498                 | .95286          |
| .212  |          | .95498           | .12861       |   | .2172  | .08501                 | .95282          |
| .212  | ı        | .95492           | .12869       |   | .2173  | .08504                 | .95278          |
| .212  |          | .95488           | .12876       |   | .2174  | .08507                 | .95274          |
| .212  |          | .95484           | .12883       |   | .2175  | .08510                 | .95270          |
| .212  |          | .95480           | .12890       |   | .2176  | l .                    | .95260          |
| .212  | 1        | .95476<br>.95472 | .12897       |   | .2177  | .08515                 | .95256          |
| 212   |          | .95468           | .12911       |   | .2179  | .08521                 | .95252          |
| .213  |          | .95464           | .12918       |   | .2180  | .08524                 | .95248          |
| .213  | 1 .08384 | .95458           | .12926       | 1 | .2181  | .08527                 | .95244          |
| .213  |          | .95454           | .12933       |   | .2182  | .08529                 | .95238          |
| .213  |          | .95450           | . 129 40     |   | .2183  | .08532                 | .95234          |
| .213  |          | .95446           | .12947       |   | .2184  | .08535                 | .95230          |
| .213  |          | .95442           | .12954       |   | .2185  | .08538                 | .95226          |
| .213  | 1        | .95438           | .12961       |   | .2186  | .08541                 | .95222          |
| .213  |          | .95434           | .12968       |   | .2187  | .08544                 | .95218          |
| .213  |          | .95428           | .12976       | ł | .2189  | .08549                 | .95212          |
| .214  |          | .95420           | .12990       |   | .2190  | .08552                 | .95204          |
| 214   |          | .95416           | .12997       | 1 | .2191  | .08555                 | .95200          |
| .214  |          | .95412           | .13004       |   | .2192  | .08558                 | .95196          |
| .214  |          | .95408           | .13011       |   | .2193  | .08560                 | .95190          |
| .214  | 1        | .95404           | .13018       |   | . 2194 | .08563                 | .95186          |
| .214  | I        | .95398           | .13026       |   | .2195  | .08566                 | .95182          |
| .214  | .08427   | .95394           | .13033       |   | .2196  | . 08 569               | .95178          |
| .214  |          | .95390           | . 130 40     |   | .2197  | .08572                 | .95174          |
| .214  |          | .95386           | .13047       |   | .2198  | .08574                 | .95168          |
| .214  |          | .95382           | .13054       | - | . 2199 | .08577                 | .95164          |
| . 215 | .08439   | .95378           | .13061       | ] | .2200  | .08580                 | .95160          |

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TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p              | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|----------------|-------------|------------------|--------------|
| . 2200         | .08580      | .95160           | .13420       |
| . 2201         | .08583      | .95156           | .13427       |
| .2202          | .08586      | .95152           | .13434       |
| . 2203         | .08588      | .95146           | .13442       |
| .2204          | .08591      | .95142           | .13449       |
| . 2205         | .08594      | .95138           | .13456       |
| . 2206         | .08597      | .95134           | .13463       |
| .2207          | .08600      | .95130           | .13470       |
| . 2208         | .08602      | .95124           | .13478       |
| .2209          | .08605      | .95120           | .13485       |
| . 2210         | .08608      | .95116           | .13492       |
| . 2211         | .08611      | .95112           | .13499       |
| . 2212         | .08614      | .95108           | .13506       |
| .2213          | .08616      | .95102           | .13514       |
| . 2214         | .08619      | .95098           | .13521       |
| .2215          | .08622      | .95094           | .13528       |
| .2216          | .08625      | .95084           | .13543       |
| .2217<br>.2218 | .08627      | .95084           | .13543       |
| .2216          | .08633      | .95076           | .13557       |
| .2220          | .08636      | .95072           | .13564       |
| .2221          | .08639      | .95068           | .13571       |
| .2222          | .08641      | .95062           | .13579       |
| . 2223         | .08644      | .95058           | .13586       |
| .2224          | .08647      | .95054           | .13593       |
| .2225          | .08650      | .95050           | .13600       |
| . 2226         | .08652      | .95044           | .13608       |
| .2227          | .08655      | .95040           | .13615       |
| .2228          | .08658      | .95036           | .13622       |
| . 2229         | .08661      | .95032           | .13629       |
| . 2230         | .08664      | .95028           | .13636       |
| . 2231         | .08666      | .95022           | .13644       |
| .2232          | .08669      | .95018           | .13651       |
| .2233          | .08672      | .95014           | .13658       |
| . 2234         | .08675      | .95010<br>.95004 | .13665       |
| . 2236         | .08680      | .95004           | .13680       |
| .2237          | .08683      | .94996           | .13687       |
| .2238          | .08686      | .94992           | .13694       |
| . 2239         | .08688      | .94986           | .13702       |
| .2240          | .08691      | .94982           | .13709       |
| . 2241         | .08694      | .94978           | .13716       |
| . 2242         | .08697      | .94974           | .13723       |
| . 2243         | .08699      | .94968           | .13731       |
| . 2244         | .08702      | .94964           | .13738       |
| . 2245         | .08705      | .94960           | .13745       |
| .2246          | .08708      | .94956           | . 13752      |
| . 2247         | .08710      | .94950           | .13760       |
| . 2248         | .08713      | .94946           | .13767       |
|                |             |                  |              |
| . 2250         | .08719      | .94938           | .13781       |

| P      | <b>C</b> -1 | <b>c</b> ₀<br>+  | C <sub>1</sub> |
|--------|-------------|------------------|----------------|
| . 2250 | .08719      | .94938           | .13781         |
| . 2251 | .08721      | .94932           | .13789         |
| . 2252 | .08724      | .94928           | .13796         |
| .2253  | .08727      | .94924           | .13803         |
| .2254  | .08730      | .94920           | .13810         |
| .2255  | .08732      | .94914           | .13818         |
| . 2256 | .08735      | .94910           | . 13825        |
| .2257  | .08738      | .94906           | .13832         |
| .2258  | .08741      | .94902<br>.94896 | .13839         |
| .2260  | .08746      | .94892           | .13854         |
| .2261  | .08749      | .94888           | .13861         |
| .2262  | .08752      | .94884           | .13868         |
| .2263  | .08754      | .94878           | .13876         |
| .2264  | .08757      | .94874           | .13883         |
| .2265  | .08760      | .94870           | .13890         |
| .2266  | .08763      | .94866           | .13897         |
| . 2267 | .08765      | .94860           | .13905         |
| .2268  | .08768      | .94856           | .13912         |
| .2269  | .08771      | .94852           | .13919         |
| .2270  | .08774      | .94848           | .13926         |
| .2271  | .08776      | .94842           | .13934         |
| .2272  | .08779      | .94838<br>.94834 | .13941         |
| .2274  | .08784      | .94828           | .13956         |
| .2275  | .08787      | .94824           | .13963         |
| .2276  | .08790      | .94820           | .13970         |
| . 2277 | .08793      | .94816           | .13977         |
| .2278  | .08795      | .94810           | .13985         |
| .2279  | .08798      | .94806           | .13992         |
| . 2280 | .08801      | .94802           | .13999         |
| .2281  | .08804      | .94798           | .14006         |
| .2282  | .08806      | .94792<br>.94788 | .14014         |
| .2284  | .08812      | .94784           | .14021         |
| .2285  | .08814      | .94778           | .14026         |
| .2286  | .08817      | .94774           | .14043         |
| .2287  | .08820      | .94770           | .14050         |
| .2288  | .08823      | .94766           | .14057         |
| . 2289 | .08825      | .94760           | .14065         |
| . 2290 | .08828      | .94756           | .14072         |
| .2291  | .08831      | .94752           | .14079         |
| .2292  | .08833      | .94746           | .14087         |
| .2293  | .08839      | .94742           | .14101         |
| .2294  | .08841      | .94732           | .14101         |
| .2296  | .08844      | .94728           | .14116         |
| .2297  | .08847      | .94724           | .14123         |
| . 2298 | .08850      | .94720           | . 14130        |
| . 2299 | .08852      | .94714           | .14138         |
| . 2300 | .08855      | .94710           | . 14145        |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | <b>C</b> -1 | <b>c</b> <sub>0</sub> + | <b>C</b> 1 + |
|--------|-------------|-------------------------|--------------|
| .2300  | .08855      | .94710                  | .14145       |
| .2301  | .08858      | .94706                  | . 14152      |
| .2302  | .08860      | .94700                  | .14160       |
| .2303  | .08863      | .94696                  | . 14167      |
| .2304  | .08866      | .94692                  | .14174       |
| .2305  | .08868      | . 94686                 | . 14182      |
| .2306  | .08871      | .94682                  | . 14189      |
| .2307  | .08874      | .94678                  | .14196       |
| .2308  | .08877      | .94674                  | .14203       |
| .2309  | .08879      | .94668                  | .14211       |
| .2310  | .08882      | .94664                  | .14218       |
| .2311  | .08885      | .94660                  | .14225       |
| .2312  | .08887      | .94654                  | .14233       |
| .2313  | .08893      | .94646                  | .14240       |
| .2314  | .08895      | .94640                  | .14247       |
| .2316  | .08898      | .94636                  | .14262       |
| .2317  | .08901      | .94632                  | .14269       |
| .2318  | .08903      | .94626                  | .14277       |
| . 2319 | .08906      | .94622                  | .14284       |
| .2320  | .08909      | .94618                  | .14291       |
| .2321  | .08911      | .94612                  | .14299       |
| .2322  | .08914      | .94608                  | .14306       |
| .2323  | .08917      | .94604                  | .14313       |
| .2324  | .08920      | .94600                  | .14320       |
| .2325  | .08925      | .94594                  | .14328       |
| .2327  | .08928      | .94586                  | .14342       |
| .2328  | .08930      | .94580                  | .14350       |
| . 2329 | .08933      | .94576                  | .14357       |
| . 2330 | .08936      | .94572                  | .14364       |
| .2331  | .08938      | .94566                  | .14372       |
| .2332  | .08941      | .94562                  | .14379       |
| .2333  | .08944      | .94558                  | .14386       |
| .2334  | .08946      | .94552                  | .14394       |
| .2336  | .08949      | .94544                  | .14401       |
| .2337  | .08954      | .94538                  | .14416       |
| .2338  | .08957      | .94534                  | .14423       |
| .2339  | .08960      | .94530                  | .14430       |
| .2340  | .08962      | .94524                  | .14438       |
| .2341  | .08965      | .94520                  | .14445       |
| .2342  | .08968      | .94516                  | .14452       |
| .2343  | .08970      | .94510                  | .14467       |
| .2344  | .08973      | .94506                  | .14475       |
| .2345  | .08978      | .94496                  | .14482       |
| .2347  | .08981      | .94492                  | .14489       |
| 2348   | .08983      | .94486                  | .14497       |
| .2349  | .08986      | .94482                  | .14504       |
| .2350  | .08989      | .94478                  | .14511       |

| P      | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>c</b> 1 +     |  |
|--------|-------------|-----------------|------------------|--|
| .2350  | .08989      | .94478          | .14511           |  |
| .2351  | .08991      | .94472          | . 14519          |  |
| .2352  | .08994      | .94468          | . 14526          |  |
| .2353  | .08997      | .94464          | . 14533          |  |
| .2354  | .08999      | .94458          | . 14541          |  |
| .2355  | .09002      | .94454          | .14548           |  |
| .2356  | .09005      | .94450          | . 14555          |  |
| .2357  | .09007      | .94444          | .14563           |  |
| . 2358 | .09010      | .94440          | .14570           |  |
| .2359  | .09013      | .94436          | .14577           |  |
| . 2360 | .09015      | .94430          | .14585           |  |
| .2361  | .09018      | .94426          | .14592           |  |
| .2362  | .09020      | .94420          | .14600<br>.14607 |  |
| .2364  | .09026      | .94412          | .14614           |  |
| .2365  | .09028      | .94406          | .14622           |  |
| .2366  | .09031      | .94402          | .14629           |  |
| .2367  | .09034      | .94398          | .14636           |  |
| .2368  | .09036      | .94392          | .14644           |  |
| .2369  | .09039      | .94388          | .14651           |  |
| .2370  | .09042      | .94384          | .14658           |  |
| .2371  | .09044      | .94378          | .14666           |  |
| .2372  | .09047      | .94374          | .14673           |  |
| .2373  | .09049      | .94368          | .14681           |  |
| .2374  | .09052      | .94364          | .14688           |  |
| .2376  | .09055      | .94354          | .14695           |  |
| .2377  | .09060      | .94350          | .14710           |  |
| 2378   | .09063      | .94346          | .14717           |  |
| .2379  | .09065      | .94340          | . 14725          |  |
| .2380  | .09068      | .94336          | . 147 32         |  |
| .2381  | .09070      | .94330          | . 14740          |  |
| . 2382 | .09073      | .94326          | .14747           |  |
| .2383  | .09076      | .94322          | .14754           |  |
| .2384  | .09078      | .94316          | .14762           |  |
| .2386  | .09084      | .94312          | .14776           |  |
| .2387  | .09086      | .94302          | .14784           |  |
| .2388  | .09089      | .94298          | 14791            |  |
| . 2389 | .09091      | .94292          | .14799           |  |
| . 2390 | .09094      | .94288          | .14806           |  |
| .2391  | .09097      | .94284          | .14813           |  |
| . 2392 | .09099      | .94278          | .14821           |  |
| .2393  | .09102      | .94274          | .14828           |  |
| .2394  | .09104      | .94268          | .14836           |  |
| .2395  | .09107      | .94264          | .14843           |  |
| 1      | l           | .94260          | .14850           |  |
| . 2397 | .09112      | .94254          | .14858           |  |
| .2399  | .09117      | .94244          | .14873           |  |
| .2400  | .09120      | .94240          | .14880           |  |
| . 2400 | . 07120     | .74240          | 14000            |  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | <b>C</b> -1 | c₀<br>+          | <b>C</b> 1 + | P                | C-1      | <b>c</b> ₀<br>+  | <b>c</b> 1 + |
|--------|-------------|------------------|--------------|------------------|----------|------------------|--------------|
| . 2400 | .09120      | .94240           | .14880       | . 2450           | .09249   | .93998           | .15251       |
| .2401  | .09123      | .94236           | .14887       | . 2451           | .09251   | .93992           | .15259       |
| . 2402 | .09125      | .94230           | .14895       | .2452            | .09254   | .93988           | .15266       |
| .2403  | .09128      | .94226           | .14902       | .2453            | .09256   | .93982           | .15274       |
| .2404  | .09130      | . 94220          | .14910       | .2454            | .09259   | .93978           | .15281       |
| .2405  | .09133      | .94216           | .14917       | . 2455           | .09261   | .93972           | .15289       |
| .2406  | .09136      | .94212           | .14924       | . 2456           | .09264   | .93968           | .15296       |
| .2407  | .09138      | .94206           | .14932       | . 2457           | .09267   | .93964           | .15303       |
| .2408  | .09141      | .94202           | .14939       | .2458            | .09269   | .93958           | .15311       |
| .2409  | .09143      | .94196           | .14947       | .2459            | .09272   | .93954           | .15318       |
| .2410  | .09146      | .94192           | .14954       | . 2460           | .09274   | .93948           | .15326       |
| .2411  | .09149      | .94188           | .14961       | .2461            | .09277   | .93944           | .15333       |
| .2412  | .09151      | .94182           | . 14969      | .2462            | .09279   | .93938           | .15341       |
| .2413  | .09154      | .94178           | .14976       | . 2463           | .09282   | .93934           | .15348       |
| .2414  | .09156      | .94172<br>.94168 | .14984       | .2464            | .09284   | .93928           | .15356       |
| .2415  | .09139      | .94162           | .14999       | .2466            | .09289   | .93924           | .15371       |
| .2417  | .09164      | .94158           | .15006       | . 2467           | .09292   | .93914           | .15378       |
| .2418  | .09167      | .94154           | .15013       | .2468            | .09294   | .93908           | .15386       |
| .2419  | .09169      | .94148           | .15021       | . 2469           | .09297   | .93904           | .15393       |
| . 2420 | .09172      | .94144           | .15028       | . 2470           | .09300   | .93900           | .15400       |
| . 2421 | .09174      | .94138           | .15036       | . 2471           | .09302   | .93894           | .15408       |
| . 2422 | .09177      | .94134           | .15043       | .2472            | .09305   | .93890           | .15415       |
| . 2423 | .09180      | .94130           | .15050       | .2473            | . 09 307 | .93884           | .15423       |
| . 2424 | .09182      | .94124           | .15058       | . 2474           | .09310   | .93880           | .15430       |
| .2425  | .09185      | .94120           | .15065       | . 2475           | .09312   | .93874           | .15438       |
| .2426  | .09187      | .94114           | .15073       | .2476            | .09315   | .93870           | .15445       |
| . 2427 | .09190      | .94110<br>.94104 | .15080       | . 2477<br>. 2478 | .09317   | .93864<br>.93860 | .15453       |
| .2429  | .09192      | .94104           | .15095       | .2479            | .09320   | .93854           | .15468       |
| .2430  | .09198      | .94096           | .15102       | .2480            | .09325   | .93850           | .15475       |
| . 2431 | .09200      | .94090           | .15110       | . 2481           | .09327   | .93844           | . 15483      |
| .2432  | .09203      | 94086            | .15117       | . 2482           | .09330   | 93840            | .15490       |
| . 2433 | .09205      | .94080           | . 15125      | .2483            | .09332   | .93834           | . 15498      |
| . 2434 | .09208      | .94076           | .15132       | . 2484           | .09335   | .93830           | .15505       |
| . 2435 | .09210      | .94070           | .15140       | .2485            | .09337   | .93824           | .15513       |
| .2436  | .09213      | .94066           | .15147       | .2486            | .09340   | .93820           | .15520       |
| . 2437 | .09216      | .94062           | .15154       | .2487            | .09342   | .93814           | .15528       |
| .2438  | .09218      | .94056           | .15162       | .2488            | .09345   | .93810           | .15535       |
| .2439  | .09221      | .94052           | .15169       | .2489            | .09347   | .93804           | .15543       |
| .2440  |             |                  | .15177       | .2490            | .09350   | .93800           | .15550       |
| .2441  | .09226      | .94042           | .15184       | .2491            | .09352   | .93794<br>.93790 | .15558       |
| .2443  | .09231      | .94030           | .15192       | . 2492           | .09357   | .93784           | .15573       |
| .2444  | .09233      | .94026           | .15207       | .2494            | .09360   | .93780           | .15580       |
| .2445  | .09236      | .94022           | .15214       | .2495            | .09362   | .93774           | .15588       |
| .2446  | .09239      | .94018           | .15221       | . 2496           | .09365   | .93770           | .15595       |
| . 2447 | .09241      | .94012           | . 15229      | .2497            | . 09367  | .93764           | .15603       |
| . 2448 | .09244      | .94008           | .15236       | .2498            | .09370   | .93760           | .15610       |
| . 2449 | .09246      | .94002           | .15244       | . 2499           | .09372   | .93754           | .15618       |
| . 2450 | . 09 249    | .93998           | .15251       | . 2500           | .09375   | .93750           | .15625       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |   | P              | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|--------|------------------------|------------------|-------------------------|---|----------------|-------------|------------------|-------------------------|
| .2500  | .09375                 | .93750           | .15625                  | Ì | .2550          | .09499      | .93498           | . 16001                 |
| .2501  | .09377                 | . 93744          | .15633                  | Ī | .2551          | .09501      | .93492           | .16009                  |
| .2502  | .09380                 | .93740           | .15640                  |   | .2552          | .09504      | .93488           | .16016                  |
| .2503  | .09382                 | .93734           | .15648                  |   | . 2553         | .09506      | .93482           | .16024                  |
| .2504  | .09385                 | .93730           | .15655                  |   | . 2554         | .09509      | .93478           | .16031                  |
| .2505  | .09387                 | .93724           | .15663                  | 1 | . 2555         | .09511      | .93472           | .16039                  |
| .2506  | :09390                 | .93720           | .15670                  |   | .2556          | .09513      | .93466           | .16047                  |
| .2507  | .09392                 | .93714           | .15678                  |   | .2557          | .09516      | .93462           | .16054                  |
| .2508  | .09395                 | .93710           | .15685                  |   | .2558          | .09518      | .93456           | .16062                  |
| .2509  | .09397                 | .93704           | .15693                  |   | .2559          | .09521      | .93452           | .16069                  |
| . 2510 | .09400                 | .93700           | .15700                  |   | .2560          | .09523      | .93446           | .16077                  |
| .2511  | .09402                 | .93694           | .15708                  |   | .2561          | .09526      | .93442           | .16084                  |
| .2512  | .09405                 | .93690           | .15715                  |   | .2562          | .09528      | .93436           | .16092                  |
| .2513  | .09407                 | .93684           | .15723                  |   | . 2563         | .09531      | .93432           | .16099                  |
| . 2514 | .09410                 | .93680           | .15730                  |   | .2564          | .09533      | .93426           | .16107                  |
| .2515  | .09412                 | .93674           | 15738                   |   | .2565          | .09535      | .93420           | .16115                  |
| .2516  | .09415                 | .93670           | .15745                  |   | . 2566         | .09538      | .93416           | .16122                  |
| .2517  | .09417                 | .93664           | .15753                  |   | . 2567         | .09540      | .93410<br>.93406 | .16130                  |
| .2519  | .09420                 | .93660<br>.93654 | .15760                  |   | .2568<br>.2569 | .09545      | .93400           | .16137                  |
| .2520  | .09425                 | .93650           | .15775                  |   | . 2570         | .09548      | .93396           | .16152                  |
| .2521  | .09427                 | .93644           | .15783                  |   | .2571          | .09550      | .93390           | .16160                  |
| .2522  | .09430                 | .93640           | .15790                  |   | .2572          | .09552      | .93384           | .16168                  |
| .2523  | .09432                 | .93634           | .15798                  |   | .2573          | .09555      | .93380           | .16175                  |
| .2524  | .09435                 | .93630           | .15805                  |   | .2574          | .09557      | .93374           | .16183                  |
| . 2525 | .09437                 | .93624           | .15813                  |   | .2575          | .09560      | .93370           | .16190                  |
| .2526  | .09440                 | .93620           | .15820                  |   | .2576          | .09562      | .93364           | .16198                  |
| .2527  | .09442                 | .93614           | .15828                  |   | .2577          | .09565      | .93360           | .16205                  |
| .2528  | .09445                 | .93610           | .15835                  |   | .2578          | .09567      | .93354           | .16213                  |
| .2529  | .09447                 | .93604           | .15843                  |   | .2579          | .09569      | .93348           | .16221                  |
| .2530  | .09450                 | .93600           | .15850                  |   | .2580          | .09572      | .93344           | .16228                  |
| .2531  | .09452                 | .93594           | .15858                  |   | .2581          | .09574      | .93338           | .16236                  |
| .2532  | .09454                 | .93588           | .15866                  |   | .2582          | .09577      | .93334           | .16243                  |
| .2533  | .09457                 | .93584           | .15873                  |   | .2583          | .09579      | .93328           | .16251                  |
| .2534  | .09459                 | .93578           | .15881                  |   | .2584          | .09581      | .93322           | .16259                  |
| .2535  | .09462                 | .93574           | .15888                  |   | .2585          | .09584      | .93316           | .16274                  |
| 1      | 1                      | .93564           | .15903                  |   | .2587          | .09589      | .93308           | . 16281                 |
| .2537  | .09467                 | .93558           | .15903                  | 1 | .2588          | .09591      | .93308           | .16289                  |
| .2539  | .09409                 | .93554           | .15918                  |   | .2589          | .09594      | .93298           | .16296                  |
| .2540  | .09474                 | .93548           | .15926                  | 1 | .2590          | .09596      | .93292           | .16304                  |
| .2541  | .09477                 | .93544           | .15933                  | 1 | .2591          | .09598      | .93286           | .16312                  |
| .2542  | .09479                 | .93538           | .15941                  |   | .2592          | .09601      | .93282           | .16319                  |
| .2543  | .09482                 | .93534           | .15948                  |   | . 2593         | .09603      | .93276           | .16327                  |
| .2544  | .09484                 | . 93528          | .15956                  |   | .2594          | .09606      | .93272           | .16334                  |
| .2545  | .09486                 | .93522           | .15964                  |   | . 2595         | .09608      | .93266           | .16342                  |
| .2546  | .09489                 | .93518           | .15971                  |   | . 2596         | .09610      | .93260           | .16350                  |
| .2547  | .09491                 | .93512           | .15979                  |   | .2597          | .09613      | .93256           | .16357                  |
| . 2548 | .09494                 | .93508           | .15986                  |   | .2598          | .09615      | .93250           | .16365                  |
| .2549  | .09496                 | .93502           | .15994                  |   | .2599          | .09618      | .93246           | .16372                  |
| . 2550 | .09499                 | .93498           | .16001                  |   | . 2600         | .09620      | .93240           | . 16380                 |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|--------|-------------|------------------|-------------------------|
| . 2600 | .09620      | .93240           | .16380                  |
| .2601  | .09622      | . 93234          | .16388                  |
| .2602  | .09625      | .93230           | .16395                  |
| . 2603 | .09627      | .93224           | .16403                  |
| .2604  | .09630      | .93220           | .16410                  |
| .2605  | .09632      | .93214           | .16418                  |
| .2606  | .09634      | .93208           | .16426                  |
| . 2607 | .09637      | .93204           | .16433                  |
| .2608  | .09639      | .93198           | .16441                  |
| . 2609 | .09642      | .93194           | .16448                  |
| .2610  | .09644      | .93188           | .16456                  |
| .2611  | .09646      | .93182           | .16464                  |
| .2612  | .09649      | .93178           | .16471                  |
| .2613  | .09651      | .93172           | .16479                  |
| .2614  | .09654      | .93168           | .16486                  |
| .2615  | .09656      | .93162           | .16494                  |
| .2616  | .09658      | .93156           | .16502                  |
| .2617  | .09661      | .93152           | .16509                  |
| .2618  | .09663      | .93146           | .16517                  |
|        | .09668      | .93140           | <del> </del>            |
| .2620  |             | .93136           | .16532                  |
| .2621  | .09670      | .93130<br>.93126 | .16540                  |
| .2623  | .09675      | .93120           | .16555                  |
| .2624  | .09677      | .93120           | .16563                  |
| .2625  | .09680      | .93114           | .16570                  |
| . 2626 | .09682      | .93104           | .16578                  |
| . 2627 | .09684      | .93098           | .16586                  |
| .2628  | .09687      | .93094           | .16593                  |
| . 2629 | .09689      | .93088           | .16601                  |
| . 2630 | .09692      | .93084           | .16608                  |
| .2631  | .09694      | .93078           | .16616                  |
| .2632  | .09696      | .93072           | .16624                  |
| .2633  | .09699      | .93068           | .06631                  |
| . 2634 | .09701      | .93062           | .16639                  |
| .2635  | .09703      | .93056           | . 16647                 |
| . 2636 | .09706      | .93052           | .16654                  |
| .2637  | .09708      | .93046           | .16662                  |
| . 2638 | .09710      | .93040           | .16670                  |
| . 2639 | .09713      | .93036           | . 16677                 |
| . 2640 | .09715      | .93030           | .16685                  |
| . 2641 | .09718      | .93026           | . 16692                 |
| .2642  | .09720      | .93020           | .16700                  |
| .2643  | .09722      | .93014           | . 16708                 |
| . 2644 | .09725      | .93010           | .16715                  |
| .2645  | .09727      | .93004           | .16723                  |
| . 2646 | .09729      | i                | .16731                  |
| .2647  | .09732      | .92994           | .16738                  |
| . 2648 | .09734      | .92988           | .16746                  |
| .2649  | .09736      |                  | .16754                  |
| . 2650 | .09739      | .92978           | .16761                  |

| P              | C-1    | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |  |
|----------------|--------|------------------|------------------|--|
| . 2650         | .09739 | .92978           | .16761           |  |
| .2651          | .09741 | .92972           | .16769           |  |
| .2652          | .09743 | .92966           | .16777           |  |
| .2653          | .09746 | .92962           | .16784           |  |
| .2654          | .09748 | .92956           | .16792           |  |
| .2655          | .09750 | .92950           | .16800           |  |
| . 2656         | .09753 | .92946           | .16807           |  |
| .2657          | .09755 | .92940           | .16815           |  |
| . 2658         | .09758 | .92936           | .16822           |  |
| .2659          | .09760 | .92930           | .16830           |  |
| . 2660         | .09762 | .92924           | .16838           |  |
| .2661          | .09765 | .92920           | .16845           |  |
| . 2662         | .09767 | .92914<br>.92908 | .16853<br>.16861 |  |
| .2663          | .09772 | .92906           | .16868           |  |
| .2664<br>.2665 | .09774 | .92904           | .16876           |  |
| . 2666         | .09776 | .92892           | .16884           |  |
| .2667          | .09779 | .92888           | .16891           |  |
| .2668          | .09781 | .92882           | .16899           |  |
| . 2669         | .09783 | .92876           | .16907           |  |
| . 2670         | .09786 | .92872           | .16914           |  |
| . 2671         | .09788 | .92866           | .16922           |  |
| .2672          | .09790 | .92860           | .16930           |  |
| . 2673         | .09793 | .92856           | .16937           |  |
| .2674          | .09795 | .92850           | .16945           |  |
| . 2675         | .09797 | .92844           | .16953           |  |
| .2676          | .09800 | .92840           | . 16960          |  |
| .2677<br>.2678 | .09802 | .92834<br>.92828 | .16968<br>.16976 |  |
| . 2679         | .09804 | .92822           | .16984           |  |
| . 2680         | .09809 | .92818           | .16991           |  |
| .2681          | .09811 | .92812           | .16999           |  |
| .2682          | .09813 | .92812           | .17007           |  |
| .2683          | .09816 | .92802           | .17014           |  |
| .2684          | .09818 | .92796           | .17022           |  |
| . 2685         | .09820 | .92790           | . 17030          |  |
| .2686          | .09823 | .92786           | .17037           |  |
| . 2687         | .09825 | .92780           | .17045           |  |
| . 2688         | .09827 | .92774           | .17053           |  |
| .2689          | .09830 | .92770           | .17060           |  |
| . 2690         | .09832 | .92764           | .17068           |  |
| .2691          | .09834 | .92758           | .17076           |  |
| .2692          | .09837 | .92754           | .17083           |  |
| . 2694         | .09841 | .92748           | .17091           |  |
| .2695          | .09843 | .92736           | .17107           |  |
| .2696          | .09846 | .92732           | .17114           |  |
| . 2697         | .09848 | .92726           | .17122           |  |
| .2698          | .09850 | .92720           | .17130           |  |
| . 2699         | .09853 | .92716           | .17137           |  |
| . 2700         | .09855 | .92710           | .17145           |  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P       | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>C</b> 1 + |     | P       | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>C</b> <sub>1</sub> + |
|---------|-------------|------------------|--------------|-----|---------|-------------|------------------|-------------------------|
| .2700   | .09855      | .92710           | .17145       |     | .2750   | .09969      | .92438           | .17531                  |
| .2701   | .09857      | .92704           | .17153       |     | . 2751  | .09971      | .92432           | .17539                  |
| .2702   | .09860      | .92700           | .17160       |     | . 2752  | .09973      | .92426           | .17547                  |
| .2703   | .09862      | .92694           | .17168       |     | . 2753  | .09975      | .92420           | . 17555                 |
| .2704   | .09864      | .92688           | .17176       |     | . 2754  | .09978      | .92416           | .17562                  |
| .2705   | .09866      | .92682           | .17184       |     | . 27 55 | .09980      | .92410           | .17570                  |
| . 2706  | .09869      | .92678           | . 17191      | 1   | . 2756  | .09982      | .92404           | .17578                  |
| . 27 07 | .09871      | .92672           | . 17 199     | l   | . 27 57 | .09984      | .92398           | .17586                  |
| .2708   | .09873      | .92666           | .17207       |     | . 27 58 | .09987      | .92394           | .17593                  |
| . 2709  | .09876      | .92662           | .17214       |     | . 27 59 | .09989      | .92388           | .17601                  |
| .2710   | .09878      | .92656           | .17222       |     | . 2760  | .09991      | .92382           | .17609                  |
| .2711   | .09880      | .92650           | .17230       |     | .2761   | .09993      | .92376           | .17617                  |
| .2712   | .09883      | .92646<br>.92640 | .17237       |     | .2762   | .09996      | .92372           | .17624                  |
| .2714   |             |                  | .17245       |     | . 2763  | .09998      | .92366           | .17632                  |
| .2714   | .09887      | .92634<br>.92628 | .17253       |     | . 2764  | .10000      | .92360<br>.92354 | .17640                  |
| .2716   | .09892      | .92624           | .17268       |     | .2766   | .10002      | .92354           | .17655                  |
| .2717   | .09894      | .92618           | .17276       |     | .2767   | .10003      | .92344           | .17663                  |
| .2718   | .09896      | .92612           | .17284       |     | . 2768  | .10001      | .92338           | .17671                  |
| .2719   | .09899      | .92608           | . 17 29 1    |     | . 2769  | .10011      | .92332           | .17679                  |
| . 2720  | .09901      | .92602           | . 17 299     |     | . 2770  | .10014      | .92328           | .17686                  |
| . 27 21 | .09903      | .92596           | . 17 307     |     | . 2771  | .10016      | .92322           | . 17694                 |
| .2722   | .09905      | .92590           | .17315       |     | . 2772  | .10018      | .92316           | .17702                  |
| . 27 23 | .09908      | .92586           | .17322       |     | . 2773  | . 100 20    | .92310           | .17710                  |
| . 27 24 | .09910      | .92580           | .17330       |     | . 2774  | .10022      | .92304           | .17718                  |
| .2725   | .09912      | .92574           | .17338       |     | . 2775  | .10025      | .92300           | .17725                  |
| . 27 26 | .09914      | .92568           | .17346       |     | . 2776  | .10027      | .92294           | .17733                  |
| . 27 27 | .09917      | .92564           | .17353       |     | . 2777  | .10029      | .92288           | .17741                  |
| .2728   | .09919      | .92558<br>.92552 | .17361       |     | . 2778  | .10031      | .92282           | .17749                  |
| .2730   | .09924      | .92548           | .17376       |     | .2780   | .10034      | .92272           | .17764                  |
| .2731   | .09926      | .92542           | .17384       |     | . 2781  | .10038      | .92266           | .17772                  |
| . 27 32 | .09928      | .92536           | . 17 39 2    |     | . 2782  | .10040      | .92260           | .17780                  |
| . 2733  | .09930      | .92530           | .17400       | i i | . 2783  | .10042      | .92254           | .17788                  |
| .2734   | .09933      | .92526           | .17407       |     | . 2784  | .10045      | .92250           | .17795                  |
| . 2735  | .09935      | .92520           | .17415       |     | . 2785  | .10047      | .92244           | .17803                  |
| .2736   | .09937      | .92514           | .17423       |     | .2786   | . 100 49    | .92238           | .17811                  |
| .2737   | .09939      | .92508           | .17431       | ]   | . 2787  | .10051      | .92232           | .17819                  |
| .2738   | .09942      | .92504           | .17438       |     | . 2788  | .10054      | .92228           | .17826                  |
| .2739   | .09944      | .92498           | .17446       | 1   | .2789   | .100 56     | .92222           | .17834                  |
| . 27 41 | . 099 48    | .92486           | .17462       | 1   | . 2791  | .10060      | .92210           | .17850                  |
| . 27 42 | .09948      | .92480           | .17469       |     | .2792   | .10062      | .92210           | .17858                  |
| . 2743  | .09953      | .92476           | .17477       |     | .2793   | .10065      | .92200           | .17865                  |
| .2744   | .099 55     | .92470           | .17485       |     | . 2794  | .10067      | .92194           | .17873                  |
| . 2745  | .09957      | .92464           | .17493       |     | . 2795  | . 10069     | .92188           | .17881                  |
| . 27 46 | .09960      | .92460           | .17500       |     | . 2796  | .10071      | .92182           | . 17889                 |
| .2747   | .09962      | .92454           | . 17 508     |     | . 2797  | .10073      | .92176           | .17897                  |
| . 27 48 | .09964      | .92448           | .17516       |     | . 2798  | .10076      | .92172           | .17904                  |
| . 27 49 | .09966      | .92442           | . 17 524     | 1   | . 2799  | .10078      | .92166           | .17912                  |
| .2750   | . 099 69    | .92438           | .17531       | ]   | . 2800  | .10080      | .92160           | .17920                  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P                  | C-1              | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |
|--------------------|------------------|------------------|------------------|
| .2800              | .10080           | .92160           | .17920           |
| . 2801             | .10082           | .92154           | .17928           |
| . 2802             | . 10084          | .92148           | .17936           |
| . 2803             | .10087           | .92144           | .17943           |
| . 2804             | .10089           | .92138           | .17951           |
| . 2805             | .10091           | .92132           | .17959           |
| . 2806             | .10093           | .92126           | .17967           |
| . 2807             | .10095           | .92120           | .17975           |
| . 2808<br>. 2809   | .10098<br>.10100 | .92116<br>.92110 | .17982           |
| . 2810             | .10100           | .92110           | .17998           |
|                    |                  | .92104           | .18006           |
| .2811              | .10104<br>.10106 | .92098           | .18014           |
| . 2813             | .10100           | .92088           | .18021           |
| .2814              | .10111           | .92082           | .180 29          |
| .2815              | .10113           | .92076           | .18037           |
| . 2816             | .10115           | .92070           | .18045           |
| . 2817             | .10117           | .92064           | .18053           |
| . 2818             | .10119           | .92058           | .18061           |
| .2819              | .10122           | .92054           | .18068           |
| . 2820             | .10124           | .92048           | .18076           |
| . 2821             | .10126           | .92042           | .18084           |
| . 28 22            | .10128           | .92036           | .18092           |
| . 2823             | .10130           | .92030           | . 18 100         |
| . 2824             | .10133           | .92026           | .18107           |
| . 2825<br>. 2826   | .10135           | .92020<br>.92014 | .18115           |
| . 28 27            | .10130           | .92008           | .18131           |
| . 2828             | .10141           | .92002           | .18139           |
| . 2829             | .10143           | .91996           | .18147           |
| .2830              | .10146           | .91992           | .18154           |
| . 2831             | .10148           | .91986           | .18162           |
| . 2832             | .10150           | .91980           | .18170           |
| . 2833             | .10152           | .91974           | .18178           |
| . 2834             | .10154           | .91968           | .18186           |
| .2835              | .10156<br>.10159 | .91962<br>.91958 | .18194           |
|                    |                  |                  | 1                |
| . 28 37<br>. 28 38 | .10161           | .91952<br>.91946 | .18209<br>.18217 |
| . 28 39            | .10165           | .91940           | .18225           |
| . 2840             | .10167           | .91934           | . 18 2 3 3       |
| . 28 41            | .10169           | .91928           | .18241           |
| . 2842             | .10172           | .91924           | .18248           |
| . 28 43            | .10174           | .91918           | .18256           |
| . 28 44            | .10176           | .91912           | . 18264          |
| . 2845             | .10178           | .91906           | .18272           |
| . 28 46            | .10180           | .91900           | .18280           |
| .2847              | .10182           | .91894           | .18288           |
| . 28 48            | .10184           | .91888           | .18296           |
|                    |                  | .91884           | <b></b>          |
| .2850              | . 10189          | .91878           | .18311           |

| p              | C-1<br>—         | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|----------------|------------------|------------------|--------------|
| .2850          | . 10189          | .91878           | .18311       |
| . 2851         | .10191           | .91872           | .18319       |
| . 2852         | .10193           | .91866           | .18327       |
| . 2853         | .10195           | .91860           | .18335       |
| . 28 54        | .10197           | .91854           | . 18 343     |
| . 2855         | .10199<br>.10202 | .91848<br>.91844 | .18351       |
| . 28 57        | .10204           | .91838           | .18366       |
| . 28 58        | .10204           | .91832           | .18374       |
| . 2859         | . 10 208         | .91826           | .18382       |
| . 2860         | . 10 210         | .91820           | .18390       |
| . 2861         | .10212           | .91814           | .18398       |
| .2862          | .10214           | .91808<br>.91804 | .18406       |
| . 2864         | .10217           | .91798           | .18421       |
| . 2865         | .10219           | .91792           | .18421       |
| . 2866         | .10223           | .91786           | .18437       |
| . 2867         | .10225           | .91780           | .18445       |
| . 2868         | .10227           | .91774           | . 18453      |
| . 2869         | .10229           | .91768           | .18461       |
| . 2870         | . 10 23 2        | .91764           | .18468       |
| .2871          | .10234           | .91758<br>.91752 | .18476       |
| .2873          | .10238           | .91732           | .18492       |
| .2874          | .10240           | .91740           | .18500       |
| . 2875         | .10242           | .91734           | .18508       |
| . 2876         | .10244           | .91728           | .18516       |
| . 2877         | .10246           | .91722           | .18524       |
| .2878          | .10249           | .91718<br>.91712 | .18531       |
| .2880          | .10253           | .91706           | .18547       |
| . 2881         | .10255           | .91700           | .18555       |
| . 2882         | .10257           | .91694           | . 18563      |
| . 2883         | .10259           | .91688           | .18571       |
| .2884          | .10261           | .91682<br>.91676 | .18579       |
| .2885          | .10263           | .91672           | .18594       |
| . 2887         | .10268           | .91666           | . 18602      |
| .2888          | .10200           | .91660           | .18610       |
| . 2889         | .10272           | .91654           | . 18618      |
| . 2890         | .10274           | .91648           | .18626       |
| .2891          | .10276           | .91642           | . 18634      |
| . 2892         | .10278           | .91636<br>.91630 | .18642       |
| . 2894         | .10282           | .91624           | .18658       |
| . 2895         | .10284           | .91618           | .18666       |
| . 2896         | .10287           | .91614           | .18673       |
| . 2897         | .10289           | .91608           | .18681       |
| . 2898         | .10291           | .91602           | .18689       |
| . 2899         | .10293           | .91596           | .18697       |
| <b>. 29</b> 00 | .10295           | .91590           | . 18705      |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P              | C-1       | <b>c</b> ₀<br>+  | <b>C</b> 1 + |   | p                | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|----------------|-----------|------------------|--------------|---|------------------|------------------------|------------------|--------------|
| <b>. 29</b> 00 | . 10 29 5 | .91590           | .18705       |   | . 2950           | .10399                 | .91298           | .19101       |
| . 2901         | . 10297   | .91584           | .18713       |   | .2951            | .10401                 | .91292           | . 19 109     |
| .2902          | .10299    | .91578           | .18721       |   | . 29 52          | .10403                 | .91286           | .19117       |
| .2903          | . 10301   | .91572           | .18729       |   | . 2953           | .10405                 | .91280           | .19125       |
| . 2904         | .10303    | .91566           | .18737       |   | . 2954           | . 10407                | .91274           | .19133       |
| . 2905         | .10305    | .91560           | .18745       |   | . 2955           | .10409                 | .91268           | .19141       |
| . 2906         | .10308    | .91556           | .18752       |   | . 29 56          | .10411                 | .91262           | .19149       |
| . 2907         | .10310    | .91550           | .18760       |   | . 2957           | .10413                 | .91256           | .19157       |
| . 2908         | .10312    | .91544           | . 18768      |   | . 29 58          | .10415                 | .91250           | .19165       |
| . 29 09        | .10314    | .91538           | .18776       |   | . 2959           | .10417                 | .91244           | .19173       |
| .2910          | .10316    | .91532           | . 18784      |   | . 2860           | .10419                 | .91238           | .19181       |
| . 2911         | .10318    | .91526           | .18792       |   | . 2961           | .10421                 | .91232           | .19189       |
| .2912          | .10320    | .91520           | .18800       |   | . 2962           | .10423                 | .91226           | .19197       |
| . 2913         | .10322    | .91514           | .18808       |   | . 2963           | .10425                 | .91220           | .19205       |
| .2914          | .10324    | .91508           | .18816       |   | . 2964           | .10427                 | .91214           | .19213       |
| .2915          | .10326    | .91502<br>.91496 | .18824       |   | . 2965<br>. 2966 | .10429                 | .91208           | .19221       |
| .2917          | 1         |                  | .18839       |   |                  | 1                      | .91202           | .19229       |
| .2918          | .10331    | .91492<br>.91486 | .18847       |   | .2967            | .10433                 | .91196<br>.91190 | .19237       |
| 2919           | .10335    | .91480           | .18855       |   | . 2969           | .10433                 | .91186           | .19243       |
| .2920          | .10337    | .91474           | .18863       |   | .2970            | .10440                 | .91180           | .19260       |
| . 29 21        | .10339    | .91468           | .18871       |   | .2971            | .10442                 | .91174           | .19268       |
| .2922          | .10341    | .91462           | . 18879      |   | .2972            | .10444                 | .91168           | .19276       |
| . 2923         | .10343    | .91456           | .18887       |   | . 2973           | .10446                 | .91162           | .19284       |
| .2924          | .10345    | .91450           | .18895       |   | . 2974           | .10448                 | .91156           | .19292       |
| . 29 25        | .10347    | .91444           | .18903       | ļ | . 2975           | .10450                 | .91150           | .19300       |
| . 2926         | .10349    | .91438           | .18911       |   | . 2976           | .10452                 | .91144           | .19308       |
| . 29 27        | .10351    | .91432           | .18919       |   | . 2977           | .10454                 | .91138           | .19316       |
| . 29 28        | .10353    | .91426           | .18927       |   | . 2978           | .10456                 | .91132           | . 19324      |
| . 29 29        | .10355    | .91420           | .18935       |   | . 2979           | .10458                 | .91126           | .19332       |
| .2930          | .10358    | .91416           | .18942       |   | .2980            | .10460                 | .91120           | .19340       |
| . 2931         | .10360    | .91410           | .18950       |   | .2981            | .10462                 | .91114           | .19348       |
| . 2932         | .10362    | .91404           | .18958       |   | .2982            | .10464                 | .91108           | .19356       |
| . 2933         | .10364    | .91398           | .18966       |   | .2983            | .10466                 | .91102           | .19364       |
| .2934          | .10366    | .91392           | .18974       |   | . 2984           | .10468                 | .91096<br>.91090 | .19372       |
| . 2935         | .10368    | .91386<br>.91380 | .18982       |   | .2985            | .10470                 | .91090           | .19388       |
| 1              | 1         | 1                | 1            |   | .2987            | .10472                 | .91078           | .19396       |
| .29 37         | .10372    | .91374           | .18998       |   | .2988            | .10474                 | .91078           | .19396       |
| .2939          | .10374    | .91362           | .19014       |   | .2989            | .10478                 | .91066           | .19412       |
| .2940          | .10378    | .91356           | . 19022      |   | . 2990           | .10480                 | .91060           | .19420       |
| . 2941         | .10380    | .91350           | .19030       | 1 | . 2991           | .10482                 | .91054           | . 19428      |
| .2942          | .10382    | .91344           | .19038       |   | 2992             | .10484                 | .91048           | .19436       |
| . 2943         | .10384    | .91338           | .19046       |   | . 2993           | .10486                 | .91042           | . 19444      |
| . 2944         | .10386    | .91332           | .19054       |   | . 2994           | .10488                 | .91036           | .19452       |
| . 2945         | .10388    | .91326           | .19062       |   | . 2995           | .10490                 | .91030           | .19460       |
| . 29 46        | .10391    | .91322           | .19069       |   | .2996            | .10492                 | .91024           | .19468       |
| . 29 47        | .10393    | .91316           | .19077       |   | .2997            | .10494                 | .91018           | . 19476      |
| . 29 48        | .10395    | .91310           | .19085       |   | . 2998           | .10496                 | .91012           | . 19484      |
| . 29 49        | . 10397   | .91304           | .19093       | - | . 2999           | .10498                 | .91006           | .19492       |
| . 2950         | .10399    | .91298           | .19101       | ] | . 3000           | .10500                 | .91000           | .19500       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

|        | 1                | +                | <b>C</b> 1 +     | P       | C-1              | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|--------|------------------|------------------|------------------|---------|------------------|------------------|--------------|
| .3000  | .10500           | .91000           | . 19500          | . 3050  | . 10599          | .90698           | .19901       |
| . 3001 | . 10502          | .90994           | . 19508          | .3051   | .10601           | .90692           | .19909       |
| .3002  | .10504           | .90988           | .19516           | .3052   | .10603           | .90686           | .19917       |
| .3003  | .10506           | .90982           | .19524           | .3053   | .10605           | .90680           | .19925       |
| .3004  | .10508           | .90976           | .19532           | .3054   | .10607           | .90674           | .19933       |
| .3005  | .10510           | .90970           | .19540           | . 3055  | .10608           | .90666           | . 19942      |
| .3006  | .10512           | .90964           | . 19548          | . 3056  | .10610           | .90660           | . 199 50     |
| .3007  | .10514           | .90958           | . 19556          | . 3057  | .10612           | .90654           | . 19958      |
| .3008  | .10516           | .90952           | . 19564          | . 30 58 | .10614           | .90648           | . 19966      |
| .3009  | .10518           | . 90946          | .19572           | .3059   | .10616           | .90642           | .19974       |
| .3010  | .10520           | .90940           | .19580           | .3060   | .10618           | .90636           | .19982       |
| .3011  | .10522           | .90934           | . 19 588         | .3061   | .10620           | .90630           | .19990       |
| .3012  | .10524           | .90928           | . 19596          | .3062   | .10622           | .90624           | .19998       |
| .3013  | .10526           | .90922           | . 19604          | .3063   | .10624           | .90618           | .20006       |
| .3014  | .10528           | .90916           | . 19612          | .3064   | . 10626          | .90612           | .20014       |
| . 3015 | .10530           | .90910           | .19620           | .3065   | .10628           | .90606           | .20022       |
| .3016  | .10532           | .90904           | .19628           | .3066   | .10630           | .90600           | .20030       |
| .3017  | .10534           | .90898           | . 19636          | .3067   | .10632           | .90594           | .20038       |
| .3018  | .10536           | .90892           | .19644           | .3068   | .10634           | .90588           | .20046       |
| .3019  | .10538           | .90886           | .19652           | .3069   | .10636           | .90582           | .20054       |
| .3020  | .10540           | .90880           | .19660           | . 3070  | .10638           | .90576           | .20062       |
| .3021  | .10542           | .90874           | . 19668          | .3071   | .10639           | .90568           | .20071       |
| .3022  | .10544           | .90868           | .19676           | .3072   | .10641           | .90562           | .20079       |
| .3023  | .10546           | .90862           | .19684           | .3073   | .10643           | .90556           | .20087       |
| .3024  | .10548           | .90856           | .19692           | .3074   | .10645           | .90550           | .20095       |
| .3025  | .10550<br>.10552 | .90850<br>.90844 | .19700<br>.19708 | .3075   | .10647<br>.10649 | .90544<br>.90538 | .20103       |
| 1      |                  |                  | 1                |         |                  | }                |              |
| .3027  | .10554           | .90838           | .19716           | .3077   | .10651<br>.10653 | .90532<br>.90526 | .20119       |
| .3028  | .10558           | .90832<br>.90826 | .19724           | .3079   | .10655           | .90520           | .20127       |
| .3030  | .10560           | .90820           | .19740           | .3080   | .10657           | .90514           | .20143       |
| .3031  | .10562           | .90814           | .19748           | .3081   | . 10659          | .90508           | . 20151      |
| .3032  | .10563           | .90806           | .19757           | .3082   | .10661           | .90502           | .20159       |
| .3033  | .10565           | .90800           | .19765           | .3083   | .10663           | .90496           | .20167       |
| .3034  | .10567           | .90794           | .19773           | .3084   | .10664           | .90488           | .20176       |
| .3035  | . 10 569         | .90788           | .19781           | . 3085  | .10666           | .90482           | . 20184      |
| .3036  | .10571           | .90782           | .19789           | .3086   | .10668           | .90476           | .20192       |
| .3037  | .10573           | .90776           | .19797           | .3087   | .10670           | .90470           | .20200       |
| .3038  | .10575           | .90770           | .19805           | .3088   | .10672           | .90464           | .20208       |
| .3039  | .10577           | .90764           | .19813           | . 3089  | .10674           | .90458           | .20216       |
| . 3040 | .10579           | .90758           | .19821           | . 3090  | .10676           | .90452           | .20224       |
| .3041  | .10581           | .90752           | .19829           | .3091   | .10678           | .90446           | .20232       |
| .3042  | .10583           | .90746<br>.90740 | .19837           | .3092   | .10680           | .90440<br>.90434 | .20240       |
| .3044  | .10587           | .90734           | . 19853          | . 3093  | .10684           | .90434           | .20246       |
| .3044  | .10589           | .90728           | . 19861          | .3094   | .10685           | .90420           | .20256       |
| .3046  | .10591           | .90722           | .19869           | .3096   | .10687           | .90420           | .20203       |
| .3047  | .10593           | .90716           | .19877           | .3097   | .10689           | .90408           | .20281       |
| 3048   | .10595           | .90710           | .19885           | .3098   | .10691           | .90400           | .20289       |
| . 3049 | .10597           | .90704           | .19893           | .3099   | .10693           | .90396           | .20297       |
| .3050  | .10599           | .90698           | .19901           | .3100   | .10695           | .90390           | .20305       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>c</b> <sub>1</sub> + |
|--------|-------------|-----------------|-------------------------|
| .3100  | .10695      | .90390          | .20305                  |
| .3101  | .10697      | .90384          | .20313                  |
| .3102  | .10699      | .90378          | .20321                  |
| .3103  | .10701      | .90372          | .20329                  |
| .3104  | . 10703     | .90366          | .20337                  |
| .3105  | .10704      | .90358          | .20346                  |
| .3106  | .10706      | .90352          | .20354                  |
| . 3107 | .10708      | .90346          | .20362                  |
| . 3108 | . 10710     | .90340          | .20370                  |
| . 3109 | .10712      | .90334          | .20378                  |
| .3110  | .10714      | .90328          | . 20386                 |
| .3111  | .10716      | .90322          | . 20394                 |
| .3112  | .10718      | .90316          | . 20 40 2               |
| .3113  | .10720      | .90310          | .20410                  |
| .3114  | .10722      | .90304          | .20418                  |
| .3115  | .10723      | .90296          | . 20427                 |
| .3116  | .10725      | .90290          | .20435                  |
| . 3117 | .10727      | .90284          | . 20443                 |
| . 3118 | .10729      | .90278          | . 20451                 |
| .3119  | .10731      | .90272          | . 20459                 |
| .3120  | .10733      | .90266          | . 20467                 |
| .3121  | .10735      | .90260          | .20475                  |
| .3122  | .10737      | .90254          | .20483                  |
| .3123  | .10738      | .90246          | .20492                  |
| .3124  | .10740      | .90240          | .20500                  |
| .3125  | .10742      | .90234          | .20508                  |
| .3126  | .10744      | .90228          | .20516                  |
| .3127  | . 107 46    | .90222          | .20524                  |
| .3128  | . 107 48    | .90216          | .20532                  |
| .3129  | .10750      | .90210          | .20540                  |
| . 3130 | . 10752     | .90204          | .20548                  |
| .3131  | .10753      | .90196          | .20557                  |
| .3132  | .10755      | .90190          | . 20565                 |
| .3133  | .10757      | .90184          | .20573                  |
| .3134  | . 10759     | .90178          | .20581                  |
| .3135  | .10761      | .90172          | .20589                  |
| .3136  | .10763      | .90166          | .20597                  |
| .3137  | .10765      | .90160          | .20605                  |
| .3138  | .10766      | .90152          | .20614                  |
| .3139  | .10768      | .90146          | .20622                  |
|        |             |                 | <del></del>             |
| .3141  | .10772      | .90134          | .20638                  |
| .3142  | .10774      | .90128          | .20646                  |
| . 3143 |             |                 | l.                      |
| . 3144 | .10778      | .90116          | .20662                  |
| .3145  | .10779      | .90108          | .20679                  |
|        |             |                 |                         |
| .3147  | .10783      | .90096          | .20687                  |
| .3148  | .10785      | .90090          | .20693                  |
|        |             |                 | <del></del>             |
| .3150  | .10789      | .90078          | .20711                  |

| P              | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |
|----------------|------------------------|------------------|------------------|
| .3150          | .10789                 | .90078           | .20711           |
| .3151          | .10791                 | .90072           | .20719           |
| .3152          | .10792                 | .90064           | .20728           |
| . 3153         | .10794                 | .90058           | .20736           |
| .3154          | .10796                 | .90052           | .20744           |
| .3155          | .10798<br>.10800       | .90046<br>.90040 | .20752<br>.20760 |
| .3157          | .10802                 | .90034           | .20768           |
| .3158          | .10804                 | .90034           | .20776           |
| .3159          | .10805                 | .90020           | .20785           |
| .3160          | . 10807                | .90014           | .20793           |
| .3161          | .10809                 | .90008           | .20801           |
| .3162          | .10811                 | .90002           | .20809           |
| .3163          | .10813                 | .89996           | .20817           |
| .3164          | .10815                 | .89990<br>.89982 | .20825           |
| .3166          | .10818                 | .89976           | .20834           |
| .3167          | .10820                 | .89970           | .20850           |
| .3168          | .10822                 | .89964           | .20858           |
| .3169          | .10824                 | .89958           | .20866           |
| .3170          | .10826                 | .89952           | .20874           |
| .3171          | .10827                 | .89944           | .20883           |
| .3172          | . 108 29               | .89938           | .20891           |
| .3173          | .10831                 | .89932           | .20899           |
| .3174          | .10833                 | .89926<br>.89920 | .20907           |
| .3176          | .10837                 | .89914           | .20913           |
| .3177          | .10838                 | .89906           | .20932           |
| .3178          | .10840                 | .89900           | .20940           |
| .3179          | .10842                 | .89894           | .20948           |
| .3180          | .10844                 | .89888           | . 209 56         |
| .3181          | .10846                 | .89882           | .20964           |
| .3182          | .10847                 | .89874<br>.89868 | .20973           |
| .3184          | .10851                 | .89862           | .20989           |
| .3185          | .10853                 | .89856           | .20997           |
| .3186          | .10855                 | .89850           | .21005           |
| .3187          | .10857                 | .89844           | .21013           |
| .3188          | . 10858                | .89836           | .21022           |
| .3189          | .10860                 | .89830           | .21030           |
| .3190          | .10862                 | .89824           | .21038           |
| .3191          | .10864                 | .89818           | .21046           |
| .3192<br>.3193 | .10866                 | .89812<br>.89804 | .21054           |
| .3194          | .10869                 | .89798           | .21063           |
| .3195          | .10871                 | .89792           | .21079           |
| .3196          | .10873                 | .89786           | .21087           |
| .3197          | .10875                 | .89780           | .21095           |
| .3198          | .10876                 | .89772           | .21104           |
| .3199          | .10878                 | .89766           | .21112           |
| . 3200         | .10880                 | .89760           | .21120           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |
|--------|-------------|------------------|------------------|
| . 3200 | .10880      | .89760           | .21120           |
| . 3201 | . 10882     | .89754           | .21128           |
| . 3202 | . 10884     | .89748           | .21136           |
| .3203  | .10885      | .89740           | .21145           |
| . 3204 | . 10887     | .89734           | .21153           |
| .3205  | .10889      | .89728           | .21161           |
| . 3206 | .10891      | .89722           | .21169           |
| .3207  | .10893      | .89716           | .21177           |
| .3208  | .10894      | .89708           | .21186           |
| . 3209 | .10896      | .89702           | .21194           |
| .3210  | .10898      | .89696           | . 21202          |
| .3211  | .10900      | .89690           | .21210           |
| .3212  | .10902      | .89684           | .21218           |
| .3213  | .10903      | .89676           | .21227           |
| .3214  | .10905      | .89670           | .21235           |
| .3215  | .10907      | .89664<br>.89658 | .21243<br>.21251 |
| . 3216 | .10909      | .89650           | .21251           |
| .3217  | .10910      | .89644           | .21268           |
| .3219  | .10912      | .89638           | .21276           |
| . 3220 | .10916      | .89632           | .21284           |
| .3221  | .10918      | .89626           | .21292           |
| .3222  | .10919      | .89618           | .21301           |
| .3223  | .10921      | .89612           | .21309           |
| . 3224 | .10923      | .89606           | .21317           |
| .3225  | .10925      | .89600           | .21325           |
| .3226  | .10926      | .89592           | .21334           |
| .3227  | .10928      | .89586           | .21342           |
| .3228  | .10930      | .89580<br>.89574 | .21350           |
|        |             |                  | -                |
| . 3230 | .10934      | .89568           | .21366           |
| .3231  | .10935      | .89560           | .21375           |
| .3232  | .10937      | .89554<br>.89548 | .21383           |
| . 3234 | .10939      | .89542           | .21391           |
| .3234  | .10941      | .89534           | .21399           |
| .3236  | .10944      | .89528           | .21416           |
| .3237  | .10946      | .89522           | .21424           |
| . 3238 | .10948      | .89516           | .21432           |
| .3239  | .10949      | .89508           | .21441           |
| . 3240 | .10951      | .89502           | .21449           |
| .3241  | .10953      | .89496           | .21457           |
| . 3242 | .10955      | .89490           | .21465           |
| .3243  | .10956      | .89 482          | .21474           |
| .3244  | .10958      | .89476<br>.89470 | .21482           |
| .3245  | .10960      | .89470           | .21490           |
| .3247  | .10962      | .89456           | .21498           |
| .3248  | .10965      | .89450           | .21507           |
| .3249  | .10967      | .89444           | .21523           |
| .3250  | .10969      | .89438           | .21531           |

| P      | C-1              | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|--------|------------------|------------------|--------------|
| . 3250 | .10969           | .89438           | .21531       |
| .3251  | .10970           | .89430           | .21540       |
| .3252  | .10972           | .89424           | .21548       |
| .3253  | .10974           | .89418           | .21556       |
| .3254  | .10976           | .89412           | .21564       |
| .3255  | . 10977          | .89404           | .21573       |
| .3256  | . 10979          | .89398           | .21581       |
| .3257  | .10981           | .89392           | .21589       |
| .3258  | .10983           | .89386           | .21597       |
| .3259  | .10984           | .89378           | .21606       |
| . 3260 | .10986           | .89372           | . 21614      |
| .3261  | .10988           | .89366           | .21622       |
| .3262  | .10990           | .89360           | .21630       |
| .3263  | .10991           | .89352           | .21639       |
| .3264  | .10993           | .89346<br>.89340 | .21647       |
| .3265  | .10995<br>.10997 | .89340           | .21655       |
| .3267  | .10997           | .89334           | 1            |
| .3268  | .11000           | .89320           | .21672       |
| .3269  | .11000           | .89314           | .21688       |
| .3270  | .11002           | .89308           | .21696       |
| .3271  | .11005           | .89300           | .21705       |
| 3272   | .11003           | .89294           | .21713       |
| .3273  | .11009           | .89288           | .21721       |
| .3274  | .11010           | .89280           | .21730       |
| .3275  | .11012           | .89274           | .21738       |
| .3276  | .11014           | .89268           | .21746       |
| .3277  | .11016           | .89262           | .21754       |
| .3278  | .11017           | .89254           | .21763       |
| .3279  | .11019           | .89248           | .21771       |
| . 3280 | .11021           | .89242           | .21779       |
| .3281  | .11023           | .89236           | .21787       |
| .3282  | .11024           | .89228           | .21796       |
| .3283  | .11026           | .89222           | .21804       |
| .3284  | .11028           | .89216           | .21812       |
| .3285  | .11029<br>.11031 | .89208<br>.89202 | .21821       |
| .3287  | .11031           | .89196           | .21837       |
| .3288  | .11035           | .89190           | .21845       |
| .3289  | .11035           | .89190           | .21854       |
| .3290  | .11038           | .89176           | .21862       |
| .3291  | .11040           | .89170           | .21870       |
| .3292  | .11041           | .89162           | .21879       |
| .3293  | .11043           | .89156           | .21887       |
| .3294  | .11045           | .89150           | .21895       |
| .3295  | .11046           | .89142           | .21904       |
| .3296  | .11048           | .89136           | .21912       |
| .3297  | .11050           | .89130           | . 21920      |
| .3298  | .11052           | .89124           | .21928       |
| .3299  | .11053           | .89116           | .21937       |
| .3300  | . 11055          | .89110           | .21945       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|--------|------------------------|------------------|-------------------------|
| . 3300 | .11055                 | .89110           | .21945                  |
| .3301  | .11057                 | .89104           | . 21 953                |
| .3302  | .11058                 | .89096           | .21962                  |
| . 3303 | .11060                 | .89090           | 21970                   |
| . 3304 | .11062                 | .89084           | .21978                  |
| .3305  | .11063                 | .89076           | .21987                  |
| .3306  | .11065                 | .89070           | .21995                  |
| .3307  | .11067<br>.11069       | .89064<br>.89058 | .22003                  |
| .3309  | .11009                 | .89050           | .22011                  |
| .3310  | .11072                 | .89044           | . 220 28                |
| .3311  | .11074                 | .89038           | . 22036                 |
| .3312  | .11075                 | .89030           | .22045                  |
| .3313  | .11077                 | .89024           | . 22053                 |
| .3314  | .11079                 | .89018           | .22061                  |
| .3315  | .11080                 | .89010           | .22070                  |
| . 3316 | .11082                 | .89004           | .22078                  |
| .3317  | .11084                 | .88998           | .22086                  |
| .3318  | .11085                 | .88990<br>.88984 | .22095                  |
| .3320  | .11087                 | .88978           | .22103                  |
| .3321  | .11090                 | .88970           | .22120                  |
| .3322  | .11090                 | .88964           | .22128                  |
| .3323  | .11094                 | .88958           | .22136                  |
| .3324  | .11096                 | .88952           | . 22144                 |
| .3325  | .11097                 | .88944           | .22153                  |
| .3326  | .11099                 | .88938           | .22161                  |
| .3327  | .11101                 | .88932           | .22169                  |
| .3328  | .11102                 | .88924           | .22178                  |
| .3330  | .11104                 | .88918           | .22186                  |
| .3331  | .11107                 | .88904           | . 22203                 |
| .3332  | .11107                 | .88898           | .22203                  |
| .3333  | .11111                 | .88892           | .22219                  |
| . 3334 | .11112                 | .88884           | .22228                  |
| .3335  | .11114                 | .88878           | .22236                  |
| . 3336 | .11116                 | .88872           | .22244                  |
| . 3337 | .11117                 | .88864           | .22253                  |
| .3338  | .11119                 | .88858           | . 22261                 |
| .3339  | .11121                 | .88852           | .22269                  |
| .3341  | .11124                 | .88838           | .22286                  |
| .3342  | .11124                 | .88832           | . 22294                 |
| .3343  | .11127                 | .88824           | . 22303                 |
| . 3344 | .11129                 | .88818           | . 22311                 |
| .3345  | .11130                 | .88810           | .22320                  |
| . 3346 | .11132                 | .88804           | . 22328                 |
| .3347  | .11134                 | .88798           | .22336                  |
| .3348  | .11135                 | .88790           | . 22345                 |
| .3349  | .11137                 | .88784           | . 22353                 |
| .3350  | .11139                 | .88778           | .22361                  |

| P      | <b>C</b> <sub>-1</sub> | C <sub>0</sub>   | C <sub>1</sub> |
|--------|------------------------|------------------|----------------|
| 2050   | -                      | +                | +              |
| .3350  | .11139                 | .88778           | .22361         |
| .3351  | .11140                 | .88770           | .22370         |
| .3352  | .11142                 | .88764<br>.88758 | .22378         |
| .3354  | .11144                 | .88750           | .22386         |
| .3355  | .11145                 | .88744           | .22395         |
| .3356  | .11149                 | .88738           | .22403         |
| .3357  | .11150                 | .88730           | .22420         |
| .3358  | .11152                 | .88724           | .22428         |
| .3359  | .11154                 | .88718           | .22436         |
| . 3360 | .11155                 | .88710           | . 22445        |
| .3361  | .11157                 | .88704           | . 22453        |
| .3362  | .11158                 | .88696           | .22462         |
| .3363  | .11160                 | .88690           | .22470         |
| .3364  | .11162                 | .88684<br>.88676 | .22478         |
| .3366  | .11165                 | .88670           | .22495         |
| .3367  | .11167                 | .88664           | .22503         |
| . 3368 | .11168                 | .88656           | .22512         |
| . 3369 | .11170                 | .88650           | .22520         |
| . 3370 | .11172                 | .88644           | . 22528        |
| . 3371 | .11173                 | .88636           | .22537         |
| .3372  | .11175                 | .88630           | .22545         |
| .3373  | .11176                 | .88622           | .22554         |
| .3374  | .11178                 | .88616<br>.88610 | .22562         |
| .3376  | .11181                 | .88602           | .22579         |
| .3377  | .11183                 | .88596           | .22587         |
| .3378  | .11185                 | .88590           | .22595         |
| .3379  | .11186                 | .88582           | . 22604        |
| .3380  | .11188                 | .88576           | .22612         |
| .3381  | .11189                 | .88568           | .22621         |
| .3382  | .11191                 | .88562           | .22629         |
| .3383  | .11193                 | .88556           | .22637         |
| .3384  | .11194                 | .88548           | .22646         |
| .3386  | .11198                 | .88536           | .22662         |
| .3387  | .11199                 | .88528           | .22671         |
| .3388  | .11201                 | .88522           | .22679         |
| . 3389 | .11202                 | .88514           | .22688         |
| . 3390 | .11204                 | .88508           | .22696         |
| .3391  | .11206                 | .88502           | .22704         |
| .3392  | .11207                 | .88494           | .22713         |
| .3393  | .11209                 | .88488           | .22721         |
| .3394  | .11210                 | .88480           | .22730         |
| .3395  | .11212                 | .88468           | .22746         |
| .3397  | .11214                 | .88460           | .22755         |
| .3398  | .11217                 | .88454           | .22763         |
| .3399  | .11218                 | .88446           | .22772         |
| .3400  | .11220                 | .88440           | . 22780        |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> -1 | <b>c₀</b><br>+   | <b>c</b> <sub>1</sub> + |
|--------|-------------|------------------|-------------------------|
| . 3400 | .11220      | .88440           | .22780                  |
| .3401  | .11222      | .88434           | . 22788                 |
| . 3402 | .11223      | .88426           | .22797                  |
| .3403  | .11225      | .88420           | .22805                  |
| . 3404 | .11226      | .88412           | .22814                  |
| . 3405 | .11228      | .88406           | .22822                  |
| .3406  | .11230      | .88400           | .22830                  |
| . 3407 | .11231      | . 88 392         | . 228 39                |
| . 3408 | .11233      | .88386           | .22847                  |
| . 3409 | .11234      | .88378           | . 228 56                |
| .3410  | .11236      | .88372           | .22864                  |
| . 3411 | .11238      | .88366           | . 22872                 |
| .3412  | .11239      | .88358           | .22881                  |
| .3413  | .11241      | .88352           | .22889                  |
| .3414  | .11242      | .88344           | .22898                  |
| .3415  | .11244      | .88338<br>.88330 | .22906                  |
| .3417  |             | .88324           | .22913                  |
| .3417  | .11247      | .88324           | .22923                  |
| . 3419 | .11250      | .88310           | .22940                  |
| .3420  | .11252      | .88304           | . 229 48                |
| .3421  | .11253      | .88296           | . 229 57                |
| .3422  | . 11255     | .88290           | .22965                  |
| .3423  | .11257      | .88284           | .22973                  |
| . 3424 | .11258      | .88276           | .22982                  |
| . 3425 | .11260      | .88270           | .22990                  |
| . 3426 | .11261      | .88262           | .22999                  |
| .3427  | .11263      | .88256<br>.88248 | .23007                  |
| .3428  | .11264      | .88242           | .23016                  |
| .3430  | .11268      | .88236           | .23024                  |
| .3431  | .11269      | .88228           | .23041                  |
| .3431  | .11209      | .88222           | .23041                  |
| .3433  | .11272      | .88214           | .230 58                 |
| .3434  | .11274      | .88208           | .23066                  |
| . 3435 | .11275      | .88200           | .23075                  |
| .3436  | .11277      | .88194           | .23083                  |
| . 3437 | .11279      | .88188           | .23091                  |
| .3438  | .11280      | .88180           | .23100                  |
| .3439  | .11282      | .88174           | .23108                  |
| . 3440 | .11283      | .88166           | .23117                  |
| .3441  | .11285      | .88160<br>.88152 | .23125                  |
| .3442  | .11288      | .88146           | .23134                  |
| .3444  | .11289      | .88138           | .23151                  |
| .3445  | .11291      | .88132           | .23159                  |
| .3446  | .11293      | .88126           | .23167                  |
| . 3447 | .11294      | .88118           | .23176                  |
| .3448  | .11296      | .88112           | .23184                  |
| .3449  | .11297      | .88104           | .23193                  |
| . 3450 | .11299      | .88098           | .23201                  |

| P      | C-1     | <b>c</b> ₀<br>+  | C <sub>1</sub> + |
|--------|---------|------------------|------------------|
| . 3450 | .11299  | .88098           | .23201           |
| .3451  | .11300  | .88090           | . 23210          |
| .3452  | .11302  | 88084            | . 23218          |
| .3453  | .11303  | .88076           | .23227           |
| .3454  | .11305′ | .88070           | . 23235          |
| .3455  | .11306  | .88062           | . 23244          |
| . 3456 | .11308  | .88056           | .23252           |
| .3457  | .11310  | .88050           | .23260           |
| .3458  | .11311  | .88042<br>.88036 | .23269<br>.23277 |
|        |         |                  |                  |
| .3460  | .11314  | .88028           | .23286           |
| .3461  | .11316  | .88022<br>.88014 | .23294           |
| .3463  | .11317  | .88008           | .23311           |
| .3464  | .11320  | .88000           | .23320           |
| .3465  | .11322  | .87994           | .23328           |
| .3466  | .11323  | .87986           | .23337           |
| . 3467 | .11325  | .87980           | .23345           |
| .3468  | .11326  | .87972           | .23354           |
| .3469  | .11328  | .87966           | .23362           |
| . 3470 | .11330  | .87960           | .23370           |
| .3471  | .11331  | .87952           | .23379           |
| .3472  | .11333  | .87946           | .23387           |
| .3473  | .11334  | .87938           | .23396           |
| .3474  | .11336  | .87932<br>.87924 | .23404           |
| .3475  | .11337  | .87924           | .23413           |
| .3477  | .11340  | .87910           | .23430           |
| .3478  | .11342  | .87904           | .23438           |
| . 3479 | .11343  | .87896           | . 23447          |
| .3480  | .11345  | .87890           | . 23455          |
| .3481  | .11346  | .87882           | .23464           |
| .3482  | .11348  | .87876           | .23472           |
| .3483  | .11349  | .87868           | .23481           |
| .3484  | .11351  | .87862           | .23489           |
| .3485  | .11352  | .87854<br>.87848 | .23498           |
| l '    |         | 1                | 1                |
| .3487  | .11355  | .87840<br>.87834 | .23515           |
| .3489  | .11358  | .87826           | .23532           |
| .3490  | .11360  | .87820           | .23540           |
| .3491  | .11361  | .87812           | .23549           |
| .3492  | .11363  | .87806           | .23557           |
| .3493  | .11364  | .87798           | .23566           |
| . 3494 | .11366  | .87792           | .23574           |
| .3495  | .11367  | .87784           | .23583           |
| .3496  | .11369  | .87778           | .23591           |
| .3497  | .11370  | .87770<br>.87764 | .23600           |
| .3499  | .11372  | .87756           | .23608           |
| . 3500 | .11375  |                  |                  |
| . 3300 | .112(2  | .87750           | .23625           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P      | C-1              | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|--------|------------------|------------------|-------------------------|
| .3500  | .11375           | .87750           | .23625                  |
| .3501  | .11376           | .87742           | . 23634                 |
| .3502  | .11378           | .87736           | .23642                  |
| .3503  | .11379           | .87728           | .23651                  |
| .3504  | .11381           | .87722           | .23659                  |
| .3505  | .11382           | .87714           | .23668                  |
| .3506  | .11384           | .87708           | .23676                  |
| .3507  | .11385           | .87700           | .23685                  |
| .3508  | .11387           | .87694           | .23693                  |
| . 3509 | .11388           | .87686           | .23702                  |
| .3510  | .11390           | .87680           | .23710                  |
| .3511  | .11391           | .87672           | . 23719                 |
| .3512  | .11393           | .87666           | . 237 27                |
| .3513  | .11394           | .87658           | . 23736                 |
| .3514  | .11396           | .87652           | .23744                  |
| .3515  | .11397<br>.11399 | .87644<br>.87638 | .23753                  |
| .3516  | .11399           |                  | .23761                  |
| .3518  | .11400           | .87630<br>.87624 | .23770                  |
| .3519  | .11402           | .87616           | .23787                  |
| .3520  | .11405           | .87610           | .23795                  |
| .3521  | .11406           | .87602           | .23804                  |
| .3522  | .11408           | .87596           | .23812                  |
| .3523  | .11409           | .87588           | .23821                  |
| .3524  | .11411           | .87582           | .23829                  |
| .3525  | .11412           | .87574           | .23838                  |
| .3526  | .11414           | .87568           | .23846                  |
| . 3527 | .11415           | .87560           | .23855                  |
| . 3528 | .11417           | .87554           | .23863                  |
| . 3529 | .11418           | .87546           | .23872                  |
| .3530  | .11420           | .87540           | .23880                  |
| .3531  | .11421           | .87532           | .23889                  |
| .3532  | .11422           | .87524           | .23898                  |
| .3533  | .11424           | .87518           | .23906                  |
| .3534  | .11425           | .87510<br>.87504 | .23915                  |
| .3536  | .11428           | .87496           | 23932                   |
| .3537  | .11430           | .87490           | .23940                  |
| .3538  | .11430           | .87482           | .23949                  |
| .3539  | .11433           | .87476           | . 239 57                |
| .3540  | .11434           | .87468           | . 23966                 |
| . 3541 | . 11436          | .87462           | . 23974                 |
| . 3542 | .11437           | .87454           | .23983                  |
| . 3543 | .11439           | . 87448          | . 239 91                |
| . 3544 | .11440           | .87440           | .24000                  |
| .3545  | .11441           | .87432           | .24009                  |
| .3546  | .11443           | . 87 426         | .24017                  |
| .3547  | .11444           | .87418           | .24026                  |
| . 3548 | .11446           | .87412           | .24034                  |
| .3549  | .11447           | .87404           |                         |
| . 3550 | .11449           | .87398           | .24051                  |

| P              | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |
|----------------|------------------|------------------|------------------|
| . 3550         | .11449           | .87398           | .24051           |
| .3551          | .11450           | .87390           | .24060           |
| . 3552         | .11452           | .87384           | . 24068          |
| . 3553         | .11453           | .87376           | .24077           |
| . 3554         | .11455           | .87370           | .24085           |
| .3555          | .11456           | .87362           | .24094           |
| .3556          | .11457           | .87354           | .24103           |
| .3557<br>.3558 | .11459<br>.11460 | .87348<br>.87340 | .24111           |
| .3559          | .11460           | .87334           | .24120<br>.24128 |
| .3560          | .11463           | .87326           | .24137           |
| . 3561         | .11465           | .87320           | .24145           |
| . 3562         | .11466           | .87312           | .24154           |
| .3563          | .11468           | .87306           | .24162           |
| .3564          | .11469           | .87298           | .24171           |
| . 3565         | .11470           | .87290           | .24180           |
| .3566          | .11472           | .87284           | .24188           |
| .3567          | .11473           | .87276<br>.87270 | .24197<br>.24205 |
| . 3569         | .11475           | .87262           | .24205           |
| .3570          | .11478           | .87256           | .24222           |
| .3571          | .11479           | .87248           | . 24231          |
| .3572          | .11480           | .87240           | .24240           |
| .3573          | .11482           | .87234           | .24248           |
| . 3574         | .11483           | .87226           | . 24257          |
| .3575<br>.3576 | .11485           | .87220           | .24265           |
| .3577          | .11486           | .87212<br>.87206 | .24274           |
| .3578          | .11489           | .87198           | .24282           |
| .3579          | .11490           | .87190           | .24300           |
| .3580          | .11492           | .87184           | . 24308          |
| .3581          | .11493           | .87176           | .24317           |
| .3582          | .11495           | .87170           | .24325           |
| .3583          | .11496           | .87162           | .24334           |
| .3584          | .11497           | .87154<br>.87148 | .24343           |
| 3586           | .11500           | .87140           | .24351           |
| .3587          | .11502           | .87134           | .24368           |
| .3588          | .11503           | .87126           | .24377           |
| .3589          | .11505           | .87120           | . 24385          |
| . 3590         | .11506           | .87112           | . 24394          |
| .3591          | .11507           | .87104           | .24403           |
| .3592          | .11509           | .87098           | .24411           |
| .3593          | .11510           | .87090           | . 24420          |
| .3594          | .11512           | .87084<br>.87076 | .24428           |
| .3596          | .11513           | .87068           | . 24446          |
| .3597          | .11516           | .87062           | .24454           |
| .3598          | .11517           | .87054           | . 24463          |
| . 3599         | .11519           | .87048           | .24471           |
| . 3600         | .11520           | .87040           | .24480           |

## /TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

|         | <b>C</b> -1 | C <sub>0</sub>   | <b>C</b> 1 |  |  |
|---------|-------------|------------------|------------|--|--|
| 1       |             | +                | +          |  |  |
| Д       | .11520      | .87040           | . 24480    |  |  |
|         | .11521      | .87032           | .24489     |  |  |
| . 6     | .11523      | .87026<br>.87018 | .24497     |  |  |
| .3604   | .11524      | .87018           | .24514     |  |  |
| .3605   | .11527      | .87004           | .24523     |  |  |
| .3606   | .11528      | .86996           | .24532     |  |  |
| .3607   | .11530      | .86990           | .24540     |  |  |
| .3608   | .11531      | .86982           | . 24549    |  |  |
| .3609   | .11533      | .86976           | .24557     |  |  |
| . 3610  | .11534      | .86968           | .24566     |  |  |
| .3611   | .11535      | .86960           | .24575     |  |  |
| .3612   | .11537      | .86954           | .24583     |  |  |
| .3614   | .11538      | .86946<br>.86940 | . 24592    |  |  |
| .3615   | .11540      | .86932           | 24609      |  |  |
| .3616   | .11542      | .86924           | .24618     |  |  |
| . 3617  | .11544      | .86918           | .24626     |  |  |
| . 36 18 | .11545      | .86910           | .24635     |  |  |
| . 36 19 | .11546      | .86902           | .24644     |  |  |
| . 3620  | .11548      | .86896           | .24652     |  |  |
| . 3621  | .11549      | . 86888          | .24661     |  |  |
| .3622   | .11551      | .86882<br>.86874 | .24669     |  |  |
| . 3623  | .11552      | .86866           | .24678     |  |  |
| .3625   | .11555      | .86860           | .24695     |  |  |
| .3626   | .11556      | .86852           | .24704     |  |  |
| .3627   | .11557      | .86844           | .24713     |  |  |
| . 3628  | .11559      | .86838           | .24721     |  |  |
| . 3629  | .11560      | .86830           | .24730     |  |  |
| .3630   | .11562      | .86824           | .24738     |  |  |
| .3631   | .11563      | .86816<br>.86808 | .24747     |  |  |
| .3632   | .11564      | .86802           | .24756     |  |  |
| .3634   | .11567      | .86794           | .24773     |  |  |
| .3635   | .11568      | .86786           | .24782     |  |  |
| .3636   | .11570      | .86780           | .24790     |  |  |
| .3637   | .11571      | .86772           | .24799     |  |  |
| .3638   | .11572      | .86764           | .24808     |  |  |
| .3639   | .11574      | .86758           | .24816     |  |  |
| .3640   | .11575      | .86750<br>.86744 | .24825     |  |  |
| .3641   | .11577      | .86736           | .24833     |  |  |
| .3643   | .11579      | .86728           | .24851     |  |  |
| .3644   | .11581      | .86722           | . 248 59   |  |  |
| . 3645  | .11582      | .86714           | .24868     |  |  |
| . 3646  | .11583      | .86706           | .24877     |  |  |
| . 3647  | .11585      | .86700           | .24885     |  |  |
| .3648   | .11586      | .86692<br>.86684 | . 24894    |  |  |
| .3650   | .11589      | .86678           | .24911     |  |  |
| .3030   | 11109       | . 00010          | . 49711    |  |  |

|        | _                |                  |                         |
|--------|------------------|------------------|-------------------------|
| P      | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
| . 3650 | .11589           | .86678           | .24911                  |
| . 3651 | .11590           | .86670           | .24920                  |
| . 3652 | .11591           | .86662           | . 249 29                |
| . 3653 | .11593           | .86656           | .24937                  |
| . 3654 | .11594           | .86648           | . 24946                 |
| .3655  | .11595           | .86640           | .24955                  |
| . 3656 | .11597           | .86634           | .24963                  |
| .3657  | .11598           | .86626           | .24972                  |
| .3658  | .11600           | .86620           | .24980                  |
| . 3659 | .11601           | .86612           | . 24989                 |
| .3660  | .11602           | .86604           | . 24998                 |
| .3661  | .11604           | .86598           | .25006                  |
| .3662  | .11605<br>.11606 | .86590<br>.86582 | .25015<br>.25024        |
|        |                  |                  | 1                       |
| . 3664 | .11608<br>.11609 | .86576<br>.86568 | .25032                  |
| .3666  | .11610           | .86560           | .25050                  |
| .3667  | .11612           | .86554           | .25058                  |
| .3668  | .11613           | .86546           | .25067                  |
| . 3669 | .11614           | .86538           | .25076                  |
| . 3670 | .11616           | .86532           | .25084                  |
| .3671  | .11617           | .86524           | .25093                  |
| . 3672 | .11618           | .86516           | .25102                  |
| .3673  | .11620           | .86510           | .25110                  |
| .3674  | .11621           | .86502           | .25119                  |
| .3675  | .11622           | .86494           | . 25128                 |
| .3676  | .11624           | .86488<br>.86480 | .25136<br>.25145        |
| .3678  | .11625           | .86472           | .25145                  |
| .3679  | .11627           | .86464           | .25163                  |
| .3680  | .11629           | .86458           | .25171                  |
| . 3681 | .11630           | .86450           | .25180                  |
| .3682  | .11631           | .86442           | . 25189                 |
| . 3683 | .11633           | .86436           | .25197                  |
| .3684  | .11634           | .86428<br>.86420 | .25206                  |
| .3686  | .11637           | .86414           | .25223                  |
| .3687  | .11638           | .86406           | .25232                  |
| .3688  | .11639           | .86398           | .25241                  |
| . 3689 | .11641           | .86392           | .25249                  |
| .3690  | .11642           | .86384           | . 25258                 |
| . 3691 | .11643           | .86376           | . 25267                 |
| .3692  | .11645           | .86370           | . 25275                 |
| . 3693 | .11646           | .86362           | .25284                  |
| .3694  | .11647           | .86354           | .25293                  |
| .3695  | .11648           | .86346           | .25302                  |
| .3696  | .11650           | .86340<br>.86332 | .25310                  |
| .3698  | .11651           | .86332           | .25319                  |
| . 3699 | .11654           | .86318           | .25336                  |
| . 3700 | .11655           | .86310           | . 25345                 |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P              | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|----------------|-------------|------------------|-------------------------|
| .3700          | .11655      | .86310           | .25345                  |
| .3701          | .11656      | .86302           | .25354                  |
| .3702          | .11658      | .86296           | . 25362                 |
| .3703          | .11659      | .86288           | .25371                  |
| .3704          | .11660      | .86280           | .25380                  |
| .3705          | .11661      | .86272           | . 25389                 |
| .3706          | .11663      | .86266           | . 25397                 |
| .3707          | .11664      | .86258           | . 25406                 |
| .3708          | .11665      | .86250           | . 25415                 |
| .3709          | .11667      | .86244           | . 25423                 |
| .3710          | .11668      | .86236           | . 25432                 |
| .3711          | .11669      | .86228           | .25441                  |
| .3712          | .11671      | .86222           | . 25449                 |
| .3713          | .11672      | .86214           | . 25458                 |
| .3714          | .11673      | .86206           | .25467                  |
| .3715<br>.3716 | .11674      | .86198           | . 25476                 |
| .3717          | .11676      | .86192           | .25484                  |
| .3718          | .11677      | .86184<br>.86176 | .25493<br>.25502        |
| .3719          | .11680      | .86170           | .25510                  |
| . 3720         | .11681      | .86162           | . 25519                 |
| .3721          | .11682      | .86154           | . 25528                 |
| .3722          | .11683      | .86146           | .25537                  |
| .3723          | .11685      | .86140           | .25545                  |
| . 37 24        | .11686      | .86132           | .25554                  |
| . 3725         | .11687      | .86124           | .25563                  |
| . 3726         | .11688      | .86116           | .25572                  |
| . 37 27        | .11690      | .86110           | .25580                  |
| . 37 28        | .11691      | .86102           | . 25589                 |
| . 3729         | .11692      | .86094           | . 25598                 |
| . 3730         | .11694      | .86088           | .25606                  |
| .3731          | . 11695     | .86080           | .25615                  |
| . 3732         | .11696      | .86072           | .25624                  |
| . 37 33        | .11697      | .86064           | . 25633                 |
| .3734          | .11699      | .86058<br>.86050 | .25641                  |
| .3735          | .11700      | .86042           | .25650                  |
| .3737          | .11701      | .86034           | .25668                  |
| .3738          | .11702      | .86028           | .25676                  |
| .3739          | .11704      | .86020           | .25685                  |
| . 3740         | .11706      | .86012           | . 25694                 |
| .3741          | .11707      | .86004           | .25703                  |
| .3742          | .11709      | .85998           | .25711                  |
| . 3743         | .11710      | .85990           | . 257 20                |
| .3744          | .11711      | .85982           | . 25729                 |
| . 3745         | .11712      | .85974           | .25738                  |
| . 37 46        | .11714      | .85968           | .25746                  |
| . 3747         | .11715      | .85960           | . 25755                 |
| . 37 48        | .11716      | .85952           | .25764                  |
| . 37 49        | .11717      | .85944           |                         |
| . 3750         | .11719      | . 85938          | .25781                  |

| P       | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |
|---------|------------------------|------------------|------------------|
| . 3750  | .11719                 | . 85938          | .25781           |
| . 3751  | .11720                 | .85930           | .25790           |
| .3752   | .11721                 | .85922           | . 25799          |
| .3753   | .11722                 | .85914           | . 25808          |
| . 3754  | .11724                 | .85908           | .25816           |
| .3755   | .11725                 | .85900           | .25825           |
| . 37 56 | .11726                 | .85892           | .25834           |
| . 37 57 | .11727                 | .85884           | .25843           |
| . 37 58 | .11729<br>.11730       | .85878<br>.85870 | .25851           |
|         |                        |                  |                  |
| .3760   | .11731                 | .85862           | .25869           |
| .3761   | .11732                 | .85854           | .25878           |
| .3762   | .11734                 | .85848<br>.85840 | .25886<br>.25895 |
| .3764   | .11736                 | .85832           | .25904           |
| .3765   | .11737                 | .85824           | .25904           |
| .3766   | .11739                 | .85818           | .25921           |
| . 3767  | .11740                 | .85810           | .25930           |
| .3768   | .11741                 | .85802           | . 25939          |
| . 37 69 | .11742                 | .85794           | . 25948          |
| .3770   | .11744                 | .85788           | .25956           |
| .3771   | .11745                 | .85780           | .25965           |
| .3772   | .11746                 | .85772           | .25974           |
| .3773   | .11747                 | .85764           | .25983           |
| .3774   | .11748                 | .85756<br>.85750 | .25992           |
| .3776   | .11751                 | .85742           | .26009           |
| .3777   | .11752                 | .85734           | .26018           |
| .3778   | .11753                 | .85726           | . 26027          |
| .3779   | .11755                 | .85720           | .26035           |
| .3780   | .11756                 | .85712           | .26044           |
| .3781   | .11757                 | .85704           | .26053           |
| .3782   | .11758                 | .85696           | .26062           |
| .3783   | .11759                 | .85688           | .26071           |
| .3785   | .11762                 | .85674           | .26088           |
| .3786   | .11763                 | .85666           | .26097           |
| .3787   | .11764                 | .85658           | .26106           |
| .3788   | .11766                 | .85652           | .26114           |
| .3789   | .11767                 | .85644           | .26123           |
| .3790   | .11768                 | . 85636          | .26132           |
| .3791   | .11769                 | .85628           | .26141           |
| .3792   | .11770                 | .85620<br>.85614 | .26150           |
| .3794   | .11773                 | .85606           | .26167           |
| .3795   | .11774                 | .85598           | .26176           |
| .3796   | .11775                 | .85590           | .26185           |
| . 3797  | .11776                 | .85582           | .26194           |
| . 3798  | .11778                 | .85576           | . 26202          |
| . 3799  | .11779                 | .85568           | . 26211          |
| . 3800  | .11780                 | .85560           | .26220           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P       | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 +     |   | P              | <b>C</b> -1 | <b>c</b> <sub>0</sub> + | <b>C</b> 1 + |
|---------|------------------------|------------------|------------------|---|----------------|-------------|-------------------------|--------------|
| . 3800  | .11780                 | .85560           | .26220           |   | .3850          | .11839      | .85178                  | .26661       |
| . 3801  | .11781                 | .85552           | . 26229          |   | .3851          | .11840      | .85170                  | .26670       |
| .3802   | .11782                 | .85544           | . 26238          |   | . 3852         | .11841      | .85162                  | .26679       |
| .3803   | .11784                 | .85538           | .26246           |   | .3853          | .11842      | .85154                  | .26688       |
| . 3804  | .11785                 | .85530           | . 26255          |   | . 3854         | .11843      | .85146                  | . 26697      |
| .3805   | .11786                 | .85522           | . 26 264         |   | . 3855         | . 11844     | .85138                  | . 26706      |
| . 3806  | .11787                 | .85514           | .26273           |   | .3856          | .11846      | .85132                  | .26714       |
| . 3807  | .11788                 | .85506           | . 26282          |   | . 3857         | .11847      | .85124                  | .26723       |
| .3808   | .11790                 | .85500           | .26290           |   | . 3858         | .11848      | .85116                  | .26732       |
| . 3809  | .11791                 | .85492           | . 26299          |   | . 3859         | .11849      | .85108                  | .26741       |
| .3810   | .117 92                | .85484           | .26308           |   | . 3860         | .11850      | .85100                  | . 26750      |
| .3811   | .11793                 | .85476           | .26317           |   | .3861          | .11851      | .85092                  | .26759       |
| .3812   | .11794                 | .85468           | .26326           |   | .3862          | .11852      | .85084                  | .26768       |
| . 3813  | .11796                 | .85462           | . 26334          |   | .3863          | .11854      | .85078                  | .26776       |
| .3814   | .11797                 | .85454           | . 26343          |   | .3864          | .11855      | .85070                  | .26785       |
| .3815   | .11798                 | .85446<br>.85438 | .26352           |   | .3865<br>.3866 | .11856      | .85062<br>.85054        | .26794       |
|         |                        | t                | ŧ.               |   | .3867          |             | 1                       | .26812       |
| .3817   | .11800<br>.11801       | .85430<br>.85422 | .26370           |   | .3868          | .11858      | .85046<br>.85038        | .26812       |
| .3819   | .11801                 | .85416           | .26387           |   | .3869          | .11860      | .85030                  | .26830       |
| .3820   | .11804                 | .85408           | .26396           |   | .3870          | .11862      | .85024                  | . 26838      |
| .3821   | .11805                 | .85400           | .26405           |   | . 3871         | .11863      | .85016                  | .26847       |
| . 38 22 | .11803                 | .85392           | .26414           |   | .3872          | .11864      | .85008                  | .26856       |
| .3823   | .11807                 | .85384           | .26423           |   | .3873          | .11865      | .85000                  | .26865       |
| . 3824  | .11809                 | .85378           | .26431           |   | .3874          | .11866      | 84992                   | . 26874      |
| 3825    | .11810                 | .85370           | 26440            |   | .3875          | .11867      | 84984                   | .26883       |
| . 38 26 | .11811                 | .85362           | .26449           |   | .3876          | .11868      | .84976                  | .26892       |
| . 38 27 | .11812                 | .85354           | . 26458          |   | . 3877         | .11869      | .84968                  | .26901       |
| . 38 28 | .11813                 | .85346           | . 26467          |   | .3878          | .11871      | .84962                  | . 26909      |
| .3829   | .11814                 | .85338           | . 26476          |   | . 3879         | .11872      | .84954                  | .26918       |
| .3830   | .11816                 | .85332           | .26484           |   | . 3880         | .11873      | .84946                  | . 26927      |
| .3831   | .11817                 | .85324           | .26493           |   | . 3881         | .11874      | .84938                  | .26936       |
| . 38 32 | .11818                 | .85316           | .26502           |   | . 3882         | .11875      | .84930                  | .26945       |
| .3833   | .11819                 | .85308           | .26511           |   | .3883          | .11876      | .84922                  | .26954       |
| .3834   | .11820                 | .85300           | .26520           |   | .3884          | .11877      | .84914                  | .26963       |
| .3835   | .11821                 | .85292<br>.85286 | .26529<br>.26537 |   | .3885          | .11878      | .84906<br>.84900        | .26972       |
| .3837   | .11824                 | .85278           | .26546           |   | . 3887         | .11881      | .84892                  | .26989       |
| .3838   | .11824                 | .85270           | .26555           |   | .3888          | .11882      | .84884                  | .26998       |
| .3839   | .11826                 | .85262           | .26564           |   | .3889          | .11883      | .84876                  | .27007       |
| . 3840  | .11827                 | .85254           | .26573           |   | .3890          | .11884      | .84868                  | . 27016      |
| .3841   | . 11828                | .85246           | . 26 582         |   | . 3891         | .11885      | .84860                  | .27025       |
| . 38 42 | .11830                 | .85240           | .26590           |   | .3892          | .11886      | .84852                  | . 27034      |
| .3843   | .11831                 | .85232           | .26599           |   | . 3893         | .11887      | .84844                  | . 27043      |
| .3844   | .11832                 | .85224           | . 26608          |   | .3894          | .11888      | .84836                  | . 27052      |
| .3845   | .11833                 | .85216           | .26617           |   | .3895          | .11889      | .84828                  | .27061       |
| . 38 46 | .11834                 | .85208           | .26626           |   | . 3896         | .11891      | .84822                  | .27069       |
| . 38 47 | .11835                 | .85200           | . 26635          |   | .3897          | .11892      | .84814                  | .27078       |
| 38 48   | .11836                 | .85192           | .26644           |   | .3898          | .11893      | .84806                  | .27087       |
| . 38 49 | .11838                 | .85186           | .26652           |   | .3899          | .11894      | .84798                  | .27096       |
| . 3850  | .11839                 | .85178           | .26661           | j | . 3900         | .11895      | .84790                  | .27105       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P       | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|---------|------------------------|------------------|--------------|
| .3900   | .11895                 | .84790           | .27105       |
| .3901   | . 11896                | .84782           | .27114       |
| .3902   | .11897                 | .84774           | .27123       |
| .3903   | .11898                 | .84766           | .27132       |
| .3904   | .11899                 | .84758           | .27141       |
| .3905   | .11900                 | .84750           | .27150       |
| . 3906  | .11902                 | .84744           | .27158       |
| .3907   | .11903                 | .84736           | .27167       |
| .3908   | .11904                 | .84728           | .27176       |
|         |                        | .84720           | .27185       |
| . 3910  | .11906                 | .84712           | .27194       |
| .3911   | .11907                 | .84704           | .27203       |
| .3912   | .11908                 | .84696           | .27212       |
| .3913   | .11909                 | .84688           | .27221       |
| .3914   | .11910                 | .84680<br>.84672 | . 27 230     |
| .3915   | .11911                 | .84664           | .27248       |
| .3917   | .11914                 | .84658           | .27256       |
| .3918   | .11914                 | .84650           | .27265       |
| .3919   | .11916                 | .84642           | .27 274      |
| . 3920  | .11917                 | .84634           | . 27 28 3    |
| . 3921  | .11918                 | .84626           | .27292       |
| .3922   | .11919                 | .84618           | .27301       |
| .3923   | .11920                 | .84610           | . 27 310     |
| .3924   | .11921                 | .84602           | . 27 319     |
| .3925   | .11922                 | . 84594          | .27328       |
| .3926   | .11923                 | .84586           | . 27 337     |
| .3927   | .11924                 | .84578           | .27346       |
| .3928   | .11925                 | .84570           | .27355       |
| .3929   | .11926                 | .84562           | .27364       |
|         | ļ                      |                  | .27381       |
| .3931   | .11929                 | .84548<br>.84540 | .27390       |
| .3933   | .11931                 | .84532           | .27399       |
| .3934   | .11932                 | .84524           | .27408       |
| .3935   | .11933                 | .84516           | 27 417       |
| .3936   | .11934                 | .84508           | . 27426      |
| . 3937  | .11935                 | .84500           | . 27 435     |
| . 3938  | .11936                 | .84492           | . 27 444     |
| .3939   | .11937                 | .84484           | . 27453      |
| .3940   | .11938                 | .84476           | . 27 462     |
| . 39 41 | .11939                 | .84468           | .27471       |
| . 39 42 | .11940                 | .84460           | . 27480      |
| . 3943  | .11941                 | .84452           | .27489       |
| .3944   | .11942                 | .84444           | .27498       |
| .3945   | .11943                 | .84436           | .27507       |
| .3946   | .11945                 | .84430           | .27524       |
| . 39 47 | .11946                 | .84422           | .27533       |
| .3946   | .11948                 | .84406           | 27 542       |
|         | .11949                 | .84398           | .27551       |
| . 3950  | .11949                 | .04390           | . 21331      |

| P              | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>C</b> 1 +       |
|----------------|------------------------|------------------|--------------------|
| .3950          | .11949                 | .84398           | .27551             |
| .3951          | .11950                 | .84390           | . 27 560           |
| .3952          | .11951                 | 84382            | . 27 569           |
| .3953          | .11952                 | .84374           | .27578             |
| .3954          | .11953                 | .84366           | . 27587            |
| . 3955         | .11954                 | .84358           | .27596             |
| .3956          | .11955                 | .84350           | . 27605            |
| .3957<br>.3958 | .11956<br>.11957       | .84342           | .27614             |
| .3958          | .11957                 | .84334<br>.84326 | . 27623<br>. 27632 |
| .3960          | .11959                 | .84318           | .27641             |
| .3961          | .11960                 | .84310           | .27650             |
| .3962          | .11961                 | .84302           | .27659             |
| . 3963         | .11962                 | . 84294          | .27668             |
| . 3964         | .11963                 | .84286           | .27677             |
| .3965          | .11964                 | .84278           | . 27686            |
| . 3966         | .11965                 | .84270           | .27695             |
| .3967          | .11966                 | .84262           | .27704             |
| .3968          | .11967                 | .84254<br>.84248 | .27713             |
|                | <del></del>            |                  |                    |
| .3970          | .11970                 | .84240           | .27730             |
| .3971          | .11971                 | .84232<br>.84224 | .27739             |
| .3972          | .11972                 | .84224           | .27748             |
| .3974          | .11974                 | .84208           | .27766             |
| .3975          | .11975                 | .84200           | .27775             |
| .3976          | .11976                 | .84192           | .27784             |
| . 3977         | .11977                 | .84184           | . 27,793           |
| .3978          | .11978                 | .84176           | .27802             |
| . 3979         | .11979                 | .84168           | .27811             |
| . 3980         | .11980                 | .84160           | . 278 20           |
| .3981          | .11981                 | .84152<br>.84144 | .27829             |
| .3983          | .11982                 | .84144           | .27847             |
| .3984          | .11984                 | .84128           | .27856             |
| .3985          | .11985                 | .84120           | .27865             |
| .3986          | .11986                 | .84112           | .27874             |
| . 3987         | .11987                 | .84104           | .27883             |
| .3988          | .11988                 | .8 4096          | .27892             |
| . 3989         | .11989                 | .84088           | .27901             |
| . 3990         | .11990                 | .84080           | .27910             |
| .3991          | .11991                 | .84072           | .27919             |
| .3992          | .11992                 | .84064<br>.84056 | .27928             |
| .3994          | .11994                 | .84048           | .27946             |
| 3995           | .11995                 | .84040           | 27955              |
| .3996          | .11996                 | .84032           | .27964             |
| .3997          | .11997                 | .84024           | .27973             |
| .3998          | .11998                 | .84016           | .27982             |
| .3999          | .11999                 | .84008           | . 27991            |
| .4000          | .12000                 | .84000           | . 28000            |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P       | C-1     | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |   | P              | <b>C</b> -1 | <b>c</b> ₀<br>+  | C <sub>1</sub> |
|---------|---------|------------------|-------------------------|---|----------------|-------------|------------------|----------------|
| .4000   | .12000  | .84000           | . 28000                 |   | .4050          | .12049      | .83598           | . 28451        |
| .4001   | .12001  | .83992           | . 28 0 0 9              |   | . 4051         | .12050      | .83590           | . 28460        |
| . 4002  | .12002  | .83984           | . 280 18                |   | . 4052         | .12051      | .83582           | . 28 469       |
| .4003   | .12003  | .83976           | . 28027                 |   | . 4053         | .12052      | .83574           | .28478         |
| .4004   | .12004  | .83968           | . 28036                 |   | . 4054         | .12053      | .83566           | .28487         |
| .4005   | .12005  | .83960           | .28045                  |   | .4055          | .12053      | .83556           | . 28497        |
| .4006   | .12006  | .83952           | .28054                  |   | . 4056         | .12054      | .83548           | . 28 506       |
| . 4007  | .12007  | .83944           | .28063                  |   | . 4057         | .12055      | .83540           | .28515         |
| .4008   | .12008  | .83936           | .28072                  |   | . 4058         | .12056      | .83532           | .28524         |
| . 4009  | .12009  | .83928           | . 28081                 |   | . 4059         | .12057      | .83524           | .28533         |
| .4010   | .12010  | .83920           | .28090                  |   | <b>. 40</b> 60 | .12058      | .83516           | . 28542        |
| .4011   | .12011  | .83912           | .28099                  |   | .4061          | .12059      | .83508           | .28551         |
| .4012   | .12012  | .83904           | .28108                  |   | . 4062         | .12060      | .83500           | . 28 560       |
| .4013   | .12013  | .83896           | .28117                  |   | . 4063         | .12061      | .83492           | .28569         |
| .4014   | .12014  | .83888           | .28126                  |   | .4064          | .12062      | .83484           | .28578         |
| .4015   | .12015  | .83880           | 28135                   |   | .4065          | .12063      | .83476           | . 28 587       |
| .4016   | .12016  | .83872           | . 28144                 |   | .4066          | .12064      | .83468           | .28596         |
| .4017   | .12017  | .83864           | .28153                  |   | . 4067         | .12065      | .83460           | . 28605        |
| .4018   | .12018  | .83856           | . 28 162                |   | . 4068         | .12066      | .83452           | .28614         |
| .4019   | .12019  | .83848           | . 28171                 |   | .4069          | .12067      | .83444           | .28623         |
| .4020   | .12020  | .83840           | .28180                  |   | .4070          | .12068      | .83436           | .28632         |
| .4021   | .12021  | .83832           | .28189                  |   | .4071          | .12068      | .83426           | .28642         |
| .4022   | .12022  | .83824           | .28198                  |   | .4072          | .12069      | .83418           | .28651         |
| 1       |         | .83816           | l                       |   |                | .12070      | .83410           | .28660         |
| . 4024  | .12024  | .83808<br>.83800 | .28216                  |   | .4074          | .12071      | .83402           | .28669         |
| .4025   | .12023  | .83792           | .28234                  |   | .4076          | .12072      | .83386           | .28687         |
| . 4027  | .12027  | .83784           | . 28243                 |   | .4077          | .12074      | .83378           | .28696         |
| .4028   | .12028  | .83776           | . 28 252                | 1 | .4078          | .12075      | .83370           | .28705         |
| .4029   | .12029  | .83768           | . 28 261                |   | .4079          | .12076      | .83362           | .28714         |
| .4030   | .12030  | .83760           | .28270                  |   | .4080          | .12077      | .83354           | . 28723        |
| . 4031  | .12031  | .83752           | . 28 279                | 1 | . 4081         | .12078      | .83346           | . 28732        |
| .4032   | .12031  | .83742           | . 28 289                |   | . 4082         | .12079      | .83338           | . 28741        |
| . 40 33 | .12032  | .83734           | . 28 298                | l | .4083          | .12080      | .83330           | . 28750        |
| .4034   | .12033  | .83726           | . 28307                 |   | . 4084         | .12080      | .83320           | .28760         |
| 4035    | .12034  | .83718           | .28316                  |   | . 4085         | .12081      | .83312           | . 28769        |
| .4036   | .12035  | .83710           | .28325                  |   | . 4086         | .12082      | .83304           | .28778         |
| . 40 37 | .12036  | .83702           | . 28334                 |   | . 4087         | .12083      | .83296           | . 28787        |
| .4038   | .12037  | .83694           | .28343                  | 1 | . 4088         | .12084      | .83288           | .28796         |
| . 4039  | .12038  | .83686           | . 28 352                |   | . 4089         | .12085      | .83280           | .28805         |
| .4040   | . 12039 | .83678           | .28361                  |   | .4090          | .12086      | .83272           | .28814         |
| .4041   | .12040  | .83670           | .28370                  | 1 | .4091          | .12087      | .83264           | .28823         |
| .4042   | .12041  | .83662           | .28379                  |   | .4092          | .12088      | .83256           | .28832         |
| .4043   | .12042  | .83654           | .28388                  | 1 | .4093          | .12089      | .83248           | .28841         |
| . 40 44 | .12043  | .83646<br>.83638 | . 28 397                |   | .4094          | .12090      | .83240<br>.83230 | . 288 50       |
| .4045   | .12044  | .83630           | .28415                  | 1 | .4095          | .12090      | .83222           | .28869         |
| .4047   | 1       | 1                | ı                       | ł | 1              | ì           | 1                | ı •.           |
| .4047   | .12046  | .83622<br>.83614 | . 28 42 4               |   | .4097<br>.4098 | .12092      | .83214<br>.83206 | .28878         |
| 4046    | .12047  | .83606           | . 28442                 |   | .4099          | .12093      | .83198           | .28896         |
| .4050   | .12049  | .83598           | .28451                  |   | .4100          | .12095      | .83190           | .28905         |
| 1.4000  | 12049   | 100000           | . 20431                 | j | . 7100         | 12073       | .03170           | .20903         |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p       | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |   | P                | <b>C</b> <sub>-1</sub> | c₀<br>+          | <b>c</b> <sub>1</sub> + |
|---------|-------------|------------------|-------------------------|---|------------------|------------------------|------------------|-------------------------|
| .4100   | .12095      | .83190           | . 28905                 |   | .4150            | .12139                 | .82778           | . 29361                 |
| .4101   | .12096      | .83182           | .28914                  |   | .4151            | .12140                 | .82770           | .29370                  |
| .4102   | .12097      | .83174           | . 28923                 |   | . 4152           | .12140                 | .82760           | . 29 380                |
| .4103   | .12098      | .83166           | .28932                  |   | . 4153           | .12141                 | .82752           | .29389                  |
| .4104   | .12099      | .83158           | . 28941                 |   | .4154            | .12142                 | .82744           | . 29 398                |
| .4105   | .12099      | .83148           | .28951                  |   | . 4155           | .12143                 | .82736           | . 29 407                |
| .4106   | .12100      | .83140           | .28960                  |   | .4156            | .12144                 | .82728           | . 29416                 |
| .4107   | .12101      | .83132           | .28969                  |   | . 4157           | .12145                 | .82720           | . 29425                 |
| .4108   | .12102      | .83124           | .28978                  |   | .4158            | .12146                 | .82712           | . 29 434                |
| .4109   | .12103      | .83116           | . 28987                 |   | . 4159           | .12146                 | .82702           | . 29 444                |
| .4110   | .12104      | .83108           | . 28996                 |   | .4160            | .12147                 | .82694           | . 29453                 |
| .4111   | .12105      | .83100           | .29005                  |   | . 4161           | .12148                 | .82686           | . 29 462                |
| .4112   | .12106      | .83092           | .29014                  |   | .4162            | .12149                 | .82678           | .29471                  |
| .4113   | .12107      | .83084           | . 290 23                |   | .4163            | .12150                 | .82670           | . 29 480                |
| .4114   | .12108      | .83076           | .29032                  |   | .4164            | . 12151                | .82662           | .29489                  |
| .4115   | .12108      | .83066           | . 29042                 |   | .4165            | .12151                 | .82652           | .29499                  |
| .4116   | .12109      | .83058           | . 29051                 |   | .4166            | .12152                 | .82644           | . 29 508                |
| .4117   | .12110      | .83050<br>.83042 | . 29060<br>. 29069      |   | .4167            | .12153                 | .82636           | .29517                  |
| .4116   | .12111      | .83034           | .29009                  |   | .4168<br>.4169   | .12154                 | .82628<br>.82620 | .29526                  |
| .4120   | .12113      | .83026           | . 29087                 |   | .4170            | .12156                 | .82612           | .29544                  |
| .4121   | .12114      | .83018           | .29096                  |   | .4171            | .12156                 | .82602           | 29554                   |
| .4122   | .12115      | .83010           | .29105                  |   | .4172            | .12157                 | .82594           | .29563                  |
| .4123   | .12115      | .83000           | .29115                  |   | .4173            | .12158                 | .82586           | .29572                  |
| .4124   | .12116      | .82992           | . 29124                 |   | . 4174           | .12159                 | .82578           | . 29 58 1               |
| .4125   | .12117      | . 8 29 84        | . 29133                 |   | .4175            | .12160                 | .82570           | . 29 590                |
| .4126   | .12118      | .82976           | .29142                  |   | . 4176           | .12161                 | .82562           | . 29 59 9               |
| .4127   | .12119      | .82968           | .29151                  |   | . 4177           | .12161                 | .82552           | .29609                  |
| . 4128  | . 12120     | .82960           | .29160                  |   | .4178            | .12162                 | .82544           | .29618                  |
| .4129   | . 12121     | .82952           | .29169                  |   | .4179            | .12163                 | .82536           | . 29627                 |
| .4130   | .12122      | .82944           | . 29 178                |   | .4180            | .12164                 | .82528           | .29636                  |
| .4131   | .12122      | .82934           | .29188                  |   | .4181            | .12165                 | .82520           | .29645                  |
| .4132   | .12123      | .82926           | .29197                  |   | . 4182           | .12165                 | .82510<br>.82502 | .29655                  |
| .4133   | .12124      | .82918           | 1                       |   |                  |                        |                  |                         |
| .4134   | .12125      | .82910<br>.82902 | .29215                  |   | . 4184<br>. 4185 | .12167                 | .82494<br>.82486 | .29673                  |
| .4135   | .12126      | .82894           | .29224                  |   | .4186            | .12169                 | .82478           | .29691                  |
| .4137   | .12128      | .82886           | .29242                  |   | .4187            | .12170                 | .82470           | .29700                  |
| .4138   | .12128      | .82876           | .29252                  |   | .4188            | .12170                 | .82460           | .29710                  |
| .4139   | .12129      | .82868           | .29261                  |   | . 4189           | .12171                 | .82452           | .29719                  |
| .4140   | .12130      | .82860           | .29270                  |   | .4190            | .12172                 | .82444           | . 29728                 |
| .4141   | .12131      | .82852           | .29279                  |   | . 4191           | .12173                 | .82436           | . 29737                 |
| . 41 42 | .12132      | .82844           | . 29 288                |   | .4192            | .12174                 | .82428           | .29746                  |
| .4143   | .12133      | .82836           | .29297                  |   | . 4193           | .12174                 | .82418           | . 297 56                |
| .4144   | .12134      | .82828           | .29306                  |   | . 4194           | .12175                 | .82410           | . 29765                 |
| .4145   | .12134      | .82818           | .29316                  |   | .4195            | .12176                 | .82402           | .29774                  |
| .4146   | .12135      | .82810           | .29325                  |   | . 4196           | .12177                 | .82394           | . 29783                 |
| . 41 47 | .12136      | .82802           | .29334                  |   | . 4197           | .12178                 | .82386           | .29792                  |
| . 4148  | .12137      | .82794           | .29343                  |   | .4198            | .12178                 | .82376           | .29802                  |
| .4149   | .12138      | .82786           | .29352                  |   | . 4199           | .12179                 | .82368           | .29811                  |
| .4150   | .12139      | .82778           | .29361                  | ] | . 4200           | .12180                 | .82360           | . 29820                 |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p                | C-1     | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|------------------|---------|------------------|--------------|
| . 4200           | .12180  | .82360           | . 29820      |
| . 4201           | .12181  | .82352           | .29829       |
| .4202            | .12182  | .82344           | . 298 38     |
| . 4203           | .12182  | .82334           | . 298 48     |
| . 4204           | .12183  | .82326           | . 29857      |
| . 4205           | .12184  | .82318           | .29866       |
| . 4206           | . 12185 | .82310           | .29875       |
| . 4207           | .12186  | .82302           | .29884       |
| . 4208           | .12186  | .82292           | .29894       |
| . 4209           | .12187  | .82284           | .29903       |
| . 4210           | .12188  | .82276           | .29912       |
| . 4211           | .12189  | .82268           | .29921       |
| . 4212           | .12190  | .82260           | .29930       |
| . 4213           | .12190  | .82250           | . 299 40     |
| . 4214           | .12191  | .82242           | .29949       |
| . 4215           | .12192  | .82234           | . 29958      |
| . 4216<br>. 4217 | .12193  | .82226           | 1            |
| . 4217           | .12193  | .82216<br>.82208 | . 29977      |
| . 4210           | .12194  | .82200           | .29995       |
| . 4220           | .12196  | .82192           | .30004       |
| . 4221           | .12197  | .82184           | .30013       |
| . 4221           | .12197  | .82174           | .30023       |
| . 4223           | . 12198 | .82166           | .30032       |
| . 4224           | .12199  | .82158           | .30041       |
| . 4225           | .12200  | .82150           | .30050       |
| . 4226           | .12200  | .82140           | .30060       |
| . 4227           | .12201  | .82132           | .30069       |
| . 4228           | .12202  | .82124           | .30078       |
| . 4229           | .12203  | .82116           | .30087       |
| . 4230           | .12204  | .82108           | .30096       |
| . 4231           | .12204  | .82098           | .30106       |
| . 4232           | .12205  | .82090           | .30115       |
| .4233            | .12206  | .82082           | .30124       |
| .4234            | .12207  | .82074           | .30133       |
| . 4235<br>. 4236 | .12207  | .82064<br>.82056 | .30143       |
|                  | -       |                  |              |
| . 4237<br>. 4238 | .12209  | .82048<br>.82040 | .30161       |
| . 4236           | .12210  | .82030           | .30170       |
| . 4240           | .12211  | .82022           | .30189       |
| . 4241           | .12212  | .82014           | .30198       |
| . 4242           | .12213  | .82006           | .30207       |
| . 4243           | .12213  | .81996           | .30217       |
| . 4244           | .12214  | .81988           | . 30 2 26    |
| . 4245           | .12215  | .81980           | .30235       |
| . 4246           | .12216  | .81972           | .30244       |
| . 4247           | .12216  | .81962           | .30254       |
| . 4248<br>. 4249 | .12217  | .81954<br>.81946 | .30263       |
|                  |         |                  |              |
| . 4250           | .12219  | .81938           | .30281       |

| P                | C-1<br>— | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|------------------|----------|------------------|--------------|
| . 4250           | .12219   | .81938           | . 30281      |
| . 4251           | .12219   | .81928           | . 30291      |
| . 4252           | .12220   | .81920           | .30300       |
| . 4253           | .12221   | .81912           | .30309       |
| . 4254           | .12222   | .81904           | .30318       |
| .4255            | .12222   | .81894           | .30328       |
| . 4256           | .12223   | .81886           | .30337       |
| . 4257<br>. 4258 | .12224   | .81878<br>.81870 | .30346       |
| .4259            | .12225   | .81860           | .30365       |
| . 4260           | .12226   | .81852           | .30374       |
| . 4261           | .12227   | .81844           | .30383       |
| . 4262           | .12228   | .81836           | .30392       |
| .4263            | .12228   | .81826           | .30402       |
| . 4264           | .12229   | .81818           | . 30411      |
| . 4265           | .12230   | .81810           | .30420       |
| . 4266           | .12231   | .81802           | .30429       |
| . 4267<br>. 4268 | .12231   | .81792           | .30439       |
| . 4268           | .12232   | .81784<br>.81776 | .30448       |
| .4270            | .12234   | .81768           | .30466       |
| .4271            | .12234   | .81758           | .30476       |
| . 427 2          | .12235   | .81750           | 30485        |
| . 4273           | .12236   | .81742           | .30494       |
| . 4274           | .12236   | .81732           | .30504       |
| . 4275           | .12237   | .81724           | .30513       |
| . 4276           | .12238   | .81716           | .30522       |
| .4277            | .12239   | .81708<br>.81698 | .30531       |
| .4278            | .12239   | .81698           | .30550       |
| .4280            | .12241   | .81682           | .30559       |
| .4281            | .12242   | .81674           |              |
| .4281            | .12242   | .81664           | .30568       |
| . 4283           | .12243   | .81656           | .30587       |
| . 4284           | .12244   | .81648           | . 30 596     |
| . 4285           | .12244   | .81638           | .30606       |
| . 4286           | .12245   | .81630           | .30615       |
| . 4287           | .12246   | .81622           | .30624       |
| . 4288           | .12247   | .81614           | .30633       |
| . 4289<br>. 4290 | .12247   | .81604<br>.81596 | .30643       |
| . 4291           | .12249   | .81588           | .30661       |
| . 4291           | .12249   | .81578           | .30671       |
| . 429 3          | .12250   | .81570           | .30680       |
| . 429 4          | .12251   | .81562           | .30689       |
| . 4295           | .12251   | .81552           | . 30699      |
| . 4296           | .12252   | .81544           | .30708       |
| . 4297           | .12253   | .81536           | .30717       |
| . 4298<br>. 4299 | .12254   | .81528<br>.81518 | .30726       |
|                  |          |                  |              |
| . 4300           | .12255   | .81510           | . 30745      |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p      | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |   | P      | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|--------|------------------------|------------------|-------------------------|---|--------|-------------|------------------|-------------------------|
| .4300  | .12255                 | .81510           | . 307 45                |   | . 4350 | .12289      | .81078           | .31211                  |
| . 4301 | . 12256                | .81502           | . 30754                 | ļ | . 4351 | .12289      | .81068           | .31221                  |
| . 4302 | .12256                 | .81492           | .30764                  |   | . 4352 | .12290      | .81060           | .31230                  |
| . 4303 | . 12257                | .81484           | .30773                  |   | . 4353 | .12291      | . 81052          | .31239                  |
| .4304  | . 12258                | .81476           | .30782                  |   | . 4354 | .12291      | .81042           | .31249                  |
| . 4305 | .12258                 | .81466           | .30792                  |   | . 4355 | .12292      | .81034           | .31258                  |
| . 4306 | .12259                 | .81458           | .30801                  |   | . 4356 | .12293      | .81026           | .31267                  |
| .4307  | .12260                 | .81450           | .30810                  |   | . 4357 | .12293      | .81016           | .31277                  |
| . 4308 | .12261                 | .81442           | . 30819                 | į | . 4358 | .12294      | .81008           | .31286                  |
| . 4309 | .12261                 | .81432           | . 308 29                | 1 | . 4359 | .12295      | .81000           | .31295                  |
| . 4310 | .12262                 | .81424           | .30838                  |   | . 4360 | .12295      | .80990           | .31305                  |
| . 4311 | .12263                 | .81416           | . 308 47                |   | .4361  | . 12296     | .80982           | .31314                  |
| .4312  | .12263                 | .81406           | . 308 57                |   | . 4362 | .12296      | .80972           | .31324                  |
| .4313  | .12264                 | .81398           | .30866                  |   | .4363  | .12297      | .80964           | .31333                  |
| .4314  | .12265                 | .81390           | . 30875                 |   | .4364  | .12298      | .80956           | .31342                  |
| . 4315 | .12265                 | .81380           | .30885                  |   | .4365  | .12298      | .80946           | .31352                  |
| . 4316 | .12266                 | .81372           | . 30894                 |   | .4366  | .12299      | .80938           | .31361                  |
| . 4317 | .12267                 | .81364           | .30903                  |   | . 4367 | .12300      | .80930           | .31370                  |
| .4318  | .12267                 | .81354           | .30913                  |   | . 4368 | .12300      | .80920           | .31380                  |
| . 4319 | .12268                 | .81346           | . 309 22                | 1 | . 4369 | .12301      | .80912           | .31389                  |
| .4320  | .12269                 | .81338           | .30931                  |   | .4370  | .12302      | .80904           | .31398                  |
| .4321  | .12269                 | .81328           | .30941                  |   | .4371  | .12302      | .80894           | .31408                  |
| .4322  | .12270                 | .81320<br>.81312 | .30950                  |   | .4372  | .12303      | .80886           | .31417                  |
| .4323  | .12271                 | l .              | l                       |   | .4373  | .12303      | .80876           | .31427                  |
| .4324  | .12272                 | .81304<br>.81294 | .30968                  |   | . 4374 | .12304      | .80868<br>.80860 | .31436                  |
| .4325  | .12273                 | .81286           | .30 987                 |   | .4376  | .12305      | .80850           | .31445                  |
| . 4327 | .12274                 | .81278           | .30996                  |   | . 4377 | .12306      | .80842           | .31464                  |
| 4328   | .12274                 | .81268           | .31006                  |   | 4378   | .12307      | .80834           | .31473                  |
| .4329  | .12275                 | .81260           | .31015                  |   | .4379  | .12307      | .80824           | .31483                  |
| .4330  | .12276                 | .81252           | .31024                  | 1 | .4380  | .12308      | .80816           | .31492                  |
| . 4331 | .12276                 | .81242           | .31034                  | 1 | . 4381 | .12308      | .80806           | .31502                  |
| . 4332 | . 12277                | .81234           | .31043                  |   | .4382  | .12309      | .80798           | .31511                  |
| . 4333 | .12278                 | .81226           | .31052                  |   | . 4383 | .12310      | .80790           | . 31520                 |
| . 4334 | .12278                 | .81216           | .31062                  |   | . 4384 | .12310      | .80780           | .31530                  |
| 4335   | .12279                 | .81208           | .31071                  |   | . 4385 | .12311      | .80772           | .31539                  |
| . 4336 | .12280                 | .81200           | .31080                  |   | .4386  | .12312      | .80764           | .31548                  |
| . 4337 | .12280                 | .81190           | .31090                  |   | .4387  | .12312      | .80754           | .31558                  |
| . 4338 | .12281                 | .81182           | .31099                  |   | .4388  | .12313      | .80746           | .31567                  |
| . 4339 | .12282                 | .81174           | .31108                  |   | . 4389 | .12313      | .80736           | .31577                  |
| .4340  | .12282                 | .81164           | .31118                  |   | .4390  | .12314      | .80728           | .31586                  |
| . 4341 | .12283                 | .81156           | .31127                  |   | .4391  | .12315      | .80720           | .31595                  |
| . 4342 | .12284                 | .81148           | .31136                  |   | .4392  | .12315      | .80710           | .31605                  |
| .4343  | .12284                 | .81138           | .31146                  |   | . 4393 | .12316      | .80702           | .31614                  |
| . 4344 | .12285                 | .81130<br>.81120 | .31155                  |   | . 4394 | .12316      | .80692<br>.80684 | .31624                  |
| .4345  | .12285                 | .81112           | .31165                  |   | .4395  | .12317      | .80676           | .31642                  |
| 4      | ŀ                      | i .              | Į.                      |   | . 4397 | .12318      | .80666           | ł                       |
| . 4347 | .12287                 | .81104<br>.81094 | .31183                  |   | . 4397 | . 12318     | .80658           | .31652                  |
| . 4348 | .12287                 | .81094           | .31193                  |   | . 4399 | .12319      | .80648           | .31671                  |
| .4350  | .12289                 | .81078           | . 31211                 |   | .4400  | .12320      | .80640           | .31680                  |
| . 4000 | . 12207                | 1.01010          | 1.01211                 | j | • 3300 | .12020      | 100040           | 1.01000                 |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p                | C-1              | ¢<br>+           | <b>C</b> 1 + |
|------------------|------------------|------------------|--------------|
| . 4400           | .12320           | .80640           | .31680       |
| . 4401           | .12321           | .80632           | .31689       |
| . 4402           | .12321           | .80622           | .31699       |
| . 4403           | .12322           | .80614           | .31708       |
| . 4404           | .12322           | .80604           | .31718       |
| . 4405           | .12323           | .80596           | .31727       |
| . 4406           | .12324           | .80588           | .31736       |
| . 4407           | .12324           | .80578           | .31746       |
| . 4408           | .12325           | .80570           | .31755       |
| . 4409           | .12325           | .80560           | .31765       |
| .4410            | .12326           | .80552           | .31774       |
| . 4411           | .12327           | .80544           | .31783       |
| . 4412           | .12327           | .80534           | .31793       |
| . 4413           | .12328           | .80526           | .31802       |
| . 4414           | .12328           | .80516           | .31812       |
| . 4415           | .12329           | .80508           | .31821       |
| . 4416           | .12329           | .80498           | .31831       |
| .4417            | .12330           | .80490           | .31840       |
| . 4418<br>. 4419 | .12331<br>.12331 | .80482<br>.80472 | .31849       |
| .4419            | .12331           | .80464           | .31868       |
|                  |                  |                  | <del> </del> |
| .4421            | .12332           | .80454<br>.80446 | .31878       |
| .4422            | .12333           | .80446           | .31896       |
| .4423            | .12334           | .80428           | .31906       |
| .4424            | .12334           | .80428           | .31906       |
| .4426            | .12335           | .80410           | .31925       |
| . 4427           | .12336           | .80402           | .31934       |
| . 4428           | .12336           | .80392           | .31944       |
| . 4429           | .12337           | .80384           | .31953       |
| . 4430           | .12338           | .80376           | .31962       |
| . 4431           | .12338           | .80366           | .31972       |
| .4432            | .12339           | .80358           | .31981       |
| .4433            | .12339           | .80348           | .31991       |
| . 4434           | .12340           | .80340           | .32000       |
| . 4435           | .12340           | .80330           | .32010       |
| . 4436           | .12341           | .80322           | .32019       |
| . 4437           | .12342           | .80314           | .32028       |
| . 4438           | .12342           | .80304           | .32038       |
| . 4439           | .12343           | .80296           | .32047       |
| . 4440           | .12343           | .80286           | .32057       |
| .4441            | .12344           | .80278           | .32066       |
| . 4442           | .12344           | .80268           | .32076       |
| .4443            | .12345           | .80260           | .32085       |
| . 4444           | .12345           | .80250           | .32095       |
| .4445            | .12346           | .80242<br>.80234 | .32104       |
|                  | .12347           | 1                |              |
| . 4447           | .12347           | .80224<br>.80216 | .32123       |
| . 4448           | .12348           | .80216           | .32132       |
|                  | <del> </del>     |                  | <b></b>      |
| .4450            | .12349           | .80198           | .32151       |

| P                | <b>C</b> <sub>-1</sub> | <b>C</b> <sub>0</sub> + | <b>C</b> 1 + |
|------------------|------------------------|-------------------------|--------------|
| . 4450           | .12349                 | .80198                  | .32151       |
| . 4451           | .12349                 | .80188                  | .32161       |
| . 4452           | .12350                 | .80180                  | .32170       |
| . 4453           | .12350                 | .80170                  | .32180       |
| .4454            | . 12351                | .80162                  | .32189       |
| . 4455           | .12351                 | .80152                  | . 32199      |
| .4456            | . 12352                | .80144                  | .32208       |
| . 4457           | .12353                 | .80136<br>.80126        | .32217       |
| . 4458<br>. 4459 | .12353                 | .80126                  | .32227       |
| .4460            | .12354                 | .80108                  | . 32246      |
| .4461            | .12355                 | .80100                  | .32255       |
| . 4462           | .12355                 | .80090                  | .32265       |
| . 4463           | .12356                 | .80082                  | .32274       |
| . 4464           | .12356                 | .80072                  | .32284       |
| . 4465           | .12357                 | .80064                  | .32293       |
| .4466            | .12357                 | .80054                  | .32303       |
| .4467            | .12358                 | .80046                  | .32312       |
| .4468<br>.4469   | .12358                 | .80036<br>.80028        | .32322       |
| .4470            | .12360                 | .80028                  | .32331       |
|                  |                        |                         |              |
| .4471            | .12360                 | .80010<br>.80002        | .32350       |
| .4473            | .12361                 | .79992                  | .32369       |
| .4474            | .12362                 | .79984                  | .32378       |
| . 4475           | .12362                 | .79974                  | .32388       |
| . 4476           | .12363                 | .79966                  | .32397       |
| . 4477           | .12363                 | .79956                  | .32407       |
| . 4478           | .12364                 | .79948                  | .32416       |
| .4479            | .12364                 | .79938                  | .32426       |
| . 4480           | .12365                 | .79930                  | .32435       |
| .4481<br>.4482   | .12365                 | .79920<br>.79912        | .32445       |
| .4483            | .12366                 | .79902                  | .32454       |
| . 4484           | .12367                 | .79894                  | .32473       |
| .4485            | .12367                 | .79884                  | 32483        |
| . 4486           | .12368                 | .79876                  | . 32492      |
| . 4487           | .12368                 | .79866                  | .32502       |
| . 4488           | .12369                 | .79858                  | .32511       |
| .4489            | .12369                 | .79848                  | .32521       |
| . 4490           | .12370                 | .79840                  | .32530       |
| .4491            | .12370                 | .79830                  | .32540       |
| .4492            | .12371                 | .79822<br>.79812        | .32549       |
| .4494            | .12371                 | .79804                  | .32568       |
| 4495             | .12372                 | .79794                  | .32578       |
| 4496             | .12373                 | .79786                  | .32587       |
| . 4497           | .12373                 | .79776                  | .32597       |
| . 4498           | .12374                 | .79768                  | .32606       |
| . 4499           | .12374                 | .79758                  | .32616       |
| . 4500           | .12375                 | .79750                  | .32625       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P                | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|------------------|------------------------|------------------|-------------------------|
| .4500            | .12375                 | .79750           | .32625                  |
| . 4501           | .12375                 | .79740           | .32635                  |
| .4502            | .12376                 | .79732           | . 32644                 |
| . 4503           | .12376                 | .79722           | .32654                  |
| .4504            | .12377                 | .79714           | .32663                  |
| . 4505           | .12377                 | .79704           | .32673                  |
| . 4506           | .12378                 | .79696           | .32682                  |
| .4507            | .12378                 | .79686           | .32692                  |
| . 4508           | .12379                 | .79678           | .32701                  |
| .4509            | .12379                 | .79668           | .32711                  |
| .4510            | .12380                 | .79660           | .32720                  |
| . 4511<br>. 4512 | .12380<br>.12381       | .79650<br>.79642 | .32730                  |
| .4512            | .12381                 | .79632           | .32739                  |
| .4514            | .12382                 | .79624           | .327 58                 |
| .4514            | .12382                 | .79624           | . 327 58                |
| .4516            | .12383                 | .79606           | .32777                  |
| . 4517           | .12383                 | .79596           | .32787                  |
| .4518            | .12384                 | .79588           | .32796                  |
| . 4519           | .12384                 | .79578           | . 32806                 |
| 4520             | .12385                 | .79570           | .32815                  |
| . 4521           | .12385                 | .79560           | .32825                  |
| .4522            | .12386                 | .79552           | .32834                  |
| . 4523           | .12386                 | .79542           | .32844                  |
| .4524            | .12387                 | .79534<br>.79524 | .32853                  |
| .4525            | .12388                 | .79516           | .32872                  |
| .4527            | .12388                 | .79506           | .32882                  |
| .4528            | .12389                 | .79498           | 32891                   |
| . 4529           | .12389                 | .79488           | .32901                  |
| .4530            | .12390                 | .79480           | .32910                  |
| . 4531           | .12390                 | .79470           | .32920                  |
| . 4532           | .12390                 | .79460           | .32930                  |
| . 4533           | .12391                 | .79452           | . 329 39                |
| . 4534           | .12391                 | .79442           | .32949                  |
| .4535            | .12392                 | .79434           | .32958                  |
| 4537             | .12392                 | .79416           | .32977                  |
| .4537            | .12393                 | .79416           | .32977                  |
| . 4539           | .12394                 | .79398           | .32996                  |
| . 4540           | .12394                 | .79388           | .33006                  |
| . 4541           | .12395                 | .79380           | . 33015                 |
| . 4542           | .12395                 | .79370           | .33025                  |
| . 4543           | .12396                 | .79362           | .33034                  |
| . 4544           | .12396                 | .79352           | .33044                  |
| .4545            | .12396                 | .79342           | .33054                  |
| .4546            | 1                      | 1                | .33073                  |
| .4547            | .12397                 | .79324           | .33073                  |
| .4549            | .12398                 | .79316           | .33092                  |
| .4550            | .12399                 | .79298           | .33101                  |
| . 7000           | 1.120//                | 1                | 1.55101                 |

| P                | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|------------------|------------------|------------------|-------------------------|
| . 4550           | . 12399          | .79298           | .33101                  |
| . 4551           | .12399           | .79288           | .33111                  |
| . 4552           | .12400           | .79280           | .33120                  |
| . 4553           | .12400           | .79270           | .33130                  |
| . 4554           | .12401           | .79262           | .33139                  |
| . 4555<br>. 4556 | .12401           | .79252           | .33149                  |
|                  | .12401           | .79242           | . 33159                 |
| . 4557<br>. 4558 | .12402           | .79234<br>.79224 | .33168                  |
| . 4559           | .12403           | .79216           | .33178                  |
| . 4560           | .12403           | .79206           | .33197                  |
| . 4561           | .12404           | .79198           | . 33206                 |
| .4562            | .12404           | .79188           | .33216                  |
| .4563            | .12405           | .79180           | .33225                  |
| . 4564<br>. 4565 | .12405           | .79170<br>.79160 | .33235                  |
| .4566            | .12405           | .79150           | .33254                  |
| . 4567           | .12406           | .79142           | .33264                  |
| . 4568           | .12407           | .79134           | .33273                  |
| . 4569           | .12407           | .79124           | .33283                  |
| .4570            | .12408           | .79116           | .33292                  |
| .4571            | .12408           | .79106           | .33302                  |
| . 4572<br>. 4573 | .12408<br>.12409 | .79096<br>.79088 | .33312                  |
| .4574            | .12409           | .79078           | .33331                  |
| .4575            | .12410           | .79070           | .33340                  |
| . 4576           | .12410           | .79060           | .33350                  |
| . 4577           | .12411           | .79052           | .33359                  |
| .4578            | .12411           | .79042           | .33369                  |
| .4579            | .12411           | .79032           | .33379                  |
| .4580            | .12412           | .79024           | .33388                  |
| .4581            | .12412           | .79014<br>.79006 | .33398                  |
| .4583            | .12413           | .78996           | .33417                  |
| .4584            | .12413           | .78986           | .33427                  |
| . 4585           | .12414           | .78978           | .33436                  |
| . 4586           | .12414           | .78968           | .33446                  |
| . 4587           | .12415           | .78960           | .33455                  |
| .4588            | .12415           | .78950           | .33465                  |
| .4590            | .12416           | .78932           | .33484                  |
| . 4591           | .12416           | .78922           | .33494                  |
| . 4592           | .12417           | .78914           | .33503                  |
| . 4593           | .12417           | .78904           | .33513                  |
| . 4594           | .12418           | .78896           | .33522                  |
| .4595            | .12418           | .78886           | .33532                  |
| . 4596           | .12418           | .78876           | 1                       |
| .4597            | .12419           | .78868           | .33551                  |
| .4599            | .12420           | .78850           | .33570                  |
| . 4600           | .12420           | .78840           | .33580                  |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| P                | C-1<br>— | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|------------------|----------|------------------|--------------|
| .4600            | .12420   | .78840           | .33580       |
| . 4601           | .12420   | .78830           | .33590       |
| . 4602           | .12421   | .78822           | . 33599      |
| .4603            | . 12421  | .78812           | .33609       |
| . 4604           | .12422   | .78804           | .33618       |
| .4605            | .12422   | .78794           | .33628       |
| . 4606           | .12422   | .78784           | .33638       |
| .4607            | .12423   | .78776           | .33647       |
| . 4608<br>. 4609 | .12423   | .78766<br>.78758 | .33657       |
|                  |          |                  |              |
| .4610            | .12424   | .78748           | .33676       |
| . 4611           | .12424   | .78738           | .33686       |
| . 4612<br>. 4613 | .12425   | .78730<br>.78720 | .33695       |
| .4614            |          | .78712           | 1 <b>1</b>   |
| .4614            | .12426   | .78702           | .33714       |
| .4616            | . 12426  | .78692           | .33734       |
| . 4617           | .12427   | .78684           | .33743       |
| 4618             | .12427   | .78674           | .33753       |
| .4619            | .12427   | .78664           | .33763       |
| . 4620           | .12428   | .78656           | .33772       |
| . 4621           | .12428   | .78646           | .33782       |
| . 4622           | .12429   | .78638           | .33791       |
| . 4623           | .12429   | .78628           | .33801       |
| . 4624           | .12429   | .78618           | .33811       |
| . 4625           | .12430   | .78610           | .33820       |
| .4626            | .12430   | .78600           | .33830       |
| . 4627           | .12430   | .78590           | .33840       |
| . 4628<br>. 4629 | .12431   | .78582<br>.78572 | .33849       |
| . 4630           | .12432   | .78564           | .33868       |
|                  |          |                  |              |
| . 4631<br>. 4632 | .12432   | .78554<br>.78544 | .33878       |
| .4633            | .12432   | .78534           | .33897       |
| . 4634           | .12433   | .78526           | .33907       |
| . 4635           | .12433   | .78516           | .33917       |
| . 4636           | .12434   | .78 508          | .33926       |
| . 4637           | .12434   | .78498           | .33936       |
| . 4638           | .12434   | .78488           | . 339 46     |
| . 4639           | .12435   | .78480           | .33955       |
| . 4640           | .12435   | .78470           | .33965       |
| . 4641           | .12436   | .78462           | .33974       |
| . 4642           | .12436   | .78452           | .33984       |
| .4643            | .12436   | .78442           | .33994       |
| .4644            | .12437   | .78434           | .34003       |
| . 4645           | .12437   | .78424           | .34013       |
| . 4647           | .12438   | .78406           | .34023       |
| . 4648           | .12438   | .78396           | .34032       |
| . 4649           | .12438   | .78386           | .34052       |
| . 4650           | .12439   | .78378           | . 34061      |

| P                | <b>C</b> <sub>-1</sub> | <b>c</b> , +     | <b>C</b> 1 + |
|------------------|------------------------|------------------|--------------|
| .4650            | .12439                 | .78378           | .34061       |
| . 4651           | .12439                 | .78368           | .34071       |
| . 4652           | . 12439                | .78358           | .34081       |
| . 4653           | .12440                 | .78350           | .34090       |
| .4654            | .12440                 | .78340           | .34100       |
| . 4655<br>. 4656 | .12440<br>.12441       | .78330<br>.78322 | .34110       |
| .4657            | .12441                 | .78312           | .34129       |
| .4658            | .12441                 | .78304           | .34129       |
| . 4659           | .12442                 | .78294           | .34148       |
| 4660             | .12442                 | .78284           | .34158       |
| .4661            | .12443                 | .78276           | .34167       |
| .4662            | . 12443                | .78266           | .34177       |
| . 4663           | .12443                 | .78256           | .34187       |
| . 4664<br>. 4665 | .12444                 | .78248<br>.78238 | .34196       |
| . 4666           | .12444                 | .78228           | .34216       |
| . 4667           | . 12445                | .78220           | .34225       |
| . 4668           | .12445                 | .78210           | .34235       |
| . 4669           | .12445                 | .78200           | .34245       |
| . 4670           | .12446                 | .78192           | .34254       |
| . 4671           | .12446                 | .78182           | .34264       |
| . 4672<br>. 4673 | .12446                 | .78172<br>.78164 | .34274       |
| .4674            | .12447                 | .78154           | .34293       |
| .4675            | .12447                 | .78144           | .34303       |
| . 4676           | .12448                 | .78136           | .34312       |
| . 4677           | .12448                 | .78126           | .34322       |
| .4678            | .12448                 | .78116           | .34332       |
| .4679            | .12448                 | .78106           | .34342       |
| .4680            | .12449                 | .78098           | .34351       |
| . 4681<br>. 4682 | .12449                 | .78088           | .34361       |
| .4683            | .12449                 | .78070           | .34381       |
| .4684            | . 12450                | .78060           | .34390       |
| . 4685           | .12450                 | .78050           | .34400       |
| .4686            | .12451                 | .78042           | . 34409      |
| .4687            | .12451                 | .78032           | .34419       |
| . 4688<br>. 4689 | .12451                 | .78022           | .34429       |
|                  | .12452                 | .78014           | .34438       |
| .4690            | .12452                 | .78004           | .34448       |
| .4691<br>.4692   | .12452                 | .77994           | .34458       |
| .4693            | .12453                 | .77976           | .34477       |
| 4694             | .12453                 | .77966           | .34487       |
| . 4695           | .12453                 | .77956           | .34497       |
| . 4696           | .12454                 | .77948           | .34506       |
| . 4697           | . 12454                | .77938           | . 34516      |
| . 4698<br>. 4699 | .12454                 | .77928           | .34526       |
|                  |                        |                  | .34535       |
| .4700            | .12455                 | .77910           | .34545       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p                | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>c</b> <sub>1</sub> + |
|------------------|-------------|------------------|-------------------------|
| .4700            | .12455      | .77910           | . 34545                 |
| .4701            | .12455      | .77900           | . 34555                 |
| .4702            | .12456      | .77892           | . 34564                 |
| .4703            | .12456      | .77882           | .34574                  |
| .4704            | . 12456     | .77872           | . 34584                 |
| .4705            | .12456      | .77862           | .34594                  |
| .4706            | .12457      | .77854           | .34603                  |
| .4707            | .12457      | .77844           | .34613                  |
| . 4708           | .12457      | .77834           | .34623                  |
| . 4709           | .12458      | .77826           | .34632                  |
| . 4710           | . 12458     | .77816           | . 346 42                |
| .4711            | .12458      | .77806           | .34652                  |
| .4712            | .12459      | .77798           | .34661                  |
| .4713            | .12459      | .77788           | .34671                  |
| .4714            | .12459      | .77778           | .34681                  |
| . 4715           | .12459      | .77768           | .34691                  |
| . 4716           | .12460      | .77760           | .34700                  |
| . 47 17          | .12460      | .77750           | .34710                  |
| . 4718           | .12460      | .77740           | .34720                  |
| . 47 19          | .12461      | .77732           | . 34729                 |
| . 4720           | .12461      | .77722           | .34739                  |
| . 4721<br>. 4722 | .12461      | .77712           | .34749                  |
| .4723            | .12462      | .77694           | .34768                  |
| . 47 24          | .12462      | .77684           | .34778                  |
| . 47 25          | .12462      | .77674           | .34788                  |
| . 4726           | .12462      | .77664           | .34798                  |
| . 47 27          | .12463      | .77656           | .34807                  |
| .4728            | .12463      | .77646           | .34817                  |
| . 47 29          | .12463      | .77636           | . 34827                 |
| . 4730           | .12464      | .77628           | .34836                  |
| . 4731           | .12464      | .77618           | .34846                  |
| .4732            | .12464      | .77608           | .34856                  |
| .4733            | .12464      | .77598           | .34866                  |
| .4734            | .12465      | .77590           | .34875                  |
| .4736            | .12465      | .77570           | .34895                  |
| .4737            | .12465      | .77560           | .34905                  |
| 4738             | .12466      | .77552           | .34914                  |
| .4739            | .12466      | .77542           | .349.24                 |
| . 4740           | .12466      | .77532           | . 34934                 |
| . 4741           | .12466      | .77522           | .34944                  |
| . 4742           | .12467      | .77514           | .34953                  |
| . 47 43          | .12467      | .77504           | . 34963                 |
| .4744            | .12467      | .77494           | .34973                  |
| .4745            | .12467      | .77484           | .34983                  |
| . 4746           | 1           | 1                | 1                       |
| . 47 47          | .12468      | .77466<br>.77456 | .35002                  |
| . 47 48          | .12468      | .77446           | .35012                  |
| .4750            | .12469      | .77438           | .35031                  |
| . 4 ( 50         | .12409      | . ((430          | 1.0001                  |

| P                  | C-1              | с <sub>0</sub><br>+ | <b>C</b> 1 +     |
|--------------------|------------------|---------------------|------------------|
| . 4750             | .12469           | .77438              | .35031           |
| . 4751             | .12469           | .77428              | .35041           |
| . 4752             | .12469           | .77418              | .35051           |
| .4753              | .12469           | .77408              | .35061           |
| . 4754             | .12470           | .77400              | .35070           |
| .4755<br>.4756     | .12470<br>.12470 | .77390<br>.77380    | .35080           |
|                    |                  |                     | .35090           |
| . 47 57<br>. 47 58 | .12470<br>.12471 | .77370<br>.77362    | .35100<br>.35109 |
| . 47 59            | .12471           | .77352              | .35119           |
| .4760              | .12471           | .77342              | .35129           |
| . 4761             | .12471           | .77332              | . 35139          |
| .4762              | .12472           | .77324              | .35148           |
| . 4763             | .12472           | .77314              | .35158           |
| . 4764             | .12472           | .77304              | .35168           |
| .4765              | .12472           | .77294              | .35178           |
| .4766              | .12473           | .77286              | .35187           |
| . 4767<br>. 4768   | .12473           | .77276<br>.77266    | .35197<br>.35207 |
| .4769              | .12473           | .77256              | .35217           |
| .4770              | .12474           | .77248              | .35226           |
| .4771              | .12474           | .77238              | .35236           |
| .4772              | .12474           | .77228              | .35246           |
| . 4773             | .12474           | .77218              | .35256           |
| . 4774             | .12474           | .77208              | .35266           |
| .4775<br>.4776     | .12475           | .77200<br>.77190    | .35275           |
| .4777              | .12475           | .77180              | .35295           |
| .4778              | .12475           | .77170              | .35305           |
| .4779              | .12476           | .77162              | .35314           |
| .4780              | .12476           | .77152              | .35324           |
| . 4781             | .12476           | .77142              | .35334           |
| . 4782             | .12476           | .77132              | .35344           |
| .4783              | .12476           | .77122              | .35354           |
| .4784              | .12477           | .77114              | .35363           |
| .4786              | .12477           | .77094              | .35373           |
| 4787               | .12477           | .77084              | .35393           |
| .4788              | .12478           | .77076              | .35402           |
| . 4789             | .12478           | .77066              | .35412           |
| .4790              | .12478           | .77056              | .35422           |
| .4791              | .12478           | .77046              | .35432           |
| .4792              | .12478           | .77036              | .35442           |
| .4794              | .12479           | .77018              | .35461           |
| .4795              | .12479           | .77008              | .35471           |
| . 4796             | .12479           | .76998              | .35481           |
| .4797              | .12479           | .76988              | .35491           |
| . 4798             | .12480           | .76980              | .35500           |
| . 4799             | .12480           | .76970              | .35510           |
| . 4800             | .12480           | .76960              | .35520           |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p       | <b>C</b> -1 | <b>c</b> ₀<br>+  | <b>C</b> <sub>1</sub> + |   | P                | <b>C</b> -1 | <b>c</b> ₀<br>+ | <b>c</b> 1 + |
|---------|-------------|------------------|-------------------------|---|------------------|-------------|-----------------|--------------|
| .4800   | .12480      | .76960           | .35520                  | 1 | . 4850           | .12489      | .76478          | .36011       |
| . 4801  | .12480      | .76950           | .35530                  | 1 | .4851            | .12489      | .76468          | . 36021      |
| . 4802  | .12480      | .76940           | .35540                  |   | . 48 52          | . 12489     | .76458          | .36031       |
| .4803   | .12481      | .76932           | .35549                  |   | . 48 53          | .12489      | .76448          | .36041       |
| . 4804  | .12481      | .76922           | . 35559                 |   | . 4854           | .12489      | .76438          | .36051       |
| .4805   | .12481      | .76912           | .35569                  | ļ | . 4855           | . 12489     | .76428          | .36061       |
| .4806   | .12481      | .76902           | .35579                  |   | .4856            | .12490      | .76420          | .36070       |
| . 4807  | .12481      | .76892           | .35589                  |   | . 48 57          | . 12490     | .76410          | .36080       |
| .4808   | .12482      | .76884           | . 35598                 |   | . 48 58          | .12490      | .76400          | .36090       |
| .4809   | .12482      | .76874           | .35608                  |   | . 48 59          | .12490      | .76390          | .36100       |
| .4810   | .12482      | .76864           | .35618                  |   | .4860            | .12490      | .76380          | .36110       |
| .4811   | .12482      | .76854           | .35628                  |   | .4861            | .12490      | .76370          | .36120       |
| .4812   | .12482      | .76844           | .35638                  |   | . 4862           | .12490      | .76360          | .36130       |
| .4813   | .12483      | .76836           | . 35647                 |   | .4863            | .12491      | .76352          | .36139       |
| .4814   | .12483      | .76826           | .35657                  | į | .4864            | .12491      | .76342          | .36149       |
| .4815   | .12483      | .76816<br>.76806 | .35667                  |   | .4865            | .12491      | .76332          | .36159       |
| .4816   | .12483      |                  | .35677                  |   | .4866            | .12491      | 1               | .36169       |
| .4817   | .12483      | .76796<br>.76786 | .35687                  |   | . 4867<br>. 4868 | .12491      | .76312          | .36179       |
| .4819   | .12484      | .76778           | .35706                  |   | .4869            | .12491      | .76292          | .36199       |
| .4820   | .12484      | .76768           | .35716                  |   | .4870            | .12492      | .76284          | .36208       |
| .4821   | .12484      | .76758           | .35726                  | 1 | .4871            | .12492      | .76274          | .36218       |
| 4822    | .12484      | .76748           | .35736                  |   | 4872             | .12492      | .76264          | .36228       |
| .4823   | .12484      | .76738           | . 35746                 |   | .4873            | .12492      | .76254          | .36238       |
| . 4824  | .12485      | .76730           | .35755                  |   | .4874            | .12492      | .76244          | .36248       |
| . 4825  | .12485      | .76720           | .35765                  |   | .4875            | .12492      | .76234          | .36258       |
| . 48 26 | .12485      | .76710           | .35775                  |   | .4876            | .12492      | .76224          | . 36268      |
| . 4827  | .12485      | .76700           | .35785                  |   | . 4877           | .12492      | .76214          | .36278       |
| . 4828  | .12485      | .76690           | .35795                  |   | .4878            | .12493      | .76206          | .36287       |
| . 4829  | .12485      | .76680           | .35805                  |   | . 4879           | .12493      | .76196          | .36297       |
| . 4830  | .12486      | .76672           | .35814                  |   | .4880            | .12493      | .76186          | .36307       |
| .4831   | .12486      | .76662           | .35824                  |   | . 4881           | .12493      | .76176          | .36317       |
| . 4832  | .12486      | .76652           | .35834                  |   | . 4882           | .12493      | .76166          | .36327       |
| . 4834  | .12486      | .76632           | .35854                  |   | . 4884           | .12493      | .76146          | .36347       |
| .4835   | .12486      | .76622           | .35864                  |   | . 4885           | .12493      | .76136          | .36357       |
| 4836    | .12487      | .76614           | .35873                  |   | . 4886           | .12494      | .76128          | .36366       |
| . 4837  | . 12487     | .76604           | .35883                  |   | . 4887           | . 12494     | .76118          | .36376       |
| . 48 38 | .12487      | .76594           | .35893                  |   | . 4888           | .12494      | .76108          | .36386       |
| . 4839  | .12487      | .76584           | .35903                  |   | . 4889           | .12494      | .76098          | .36396       |
| . 4840  | .12487      | .76574           | .35913                  |   | . 4890           | .12494      | .76088          | .36406       |
| . 48 41 | . 12487     | .76564           | . 35923                 |   | . 4891           | .12494      | .76078          | . 36416      |
| . 48 42 | .12488      | .76556           | .35932                  |   | . 4892           | .12494      | .76068          | . 36426      |
| . 48 43 | .12488      | .76546           | .35942                  |   | . 4893           | . 12494     | .76058          | .36436       |
| . 48 44 | .12488      | .76536           | .35952                  |   | . 4894           | .12494      | .76048          | .36446       |
| . 48 45 | . 12488     | .76526           | .35962                  |   | . 4895           | .12494      | .76038          | .36456       |
| . 48 46 | .12488      | .76516           | .35972                  |   | .4896            | .12495      | .76030          | .36465       |
| . 48 47 | .12488      | .76506           | .35982                  |   | . 4897           | .12495      | .76020          | .36475       |
| . 4848  | .12488      | .76496           | . 35992                 |   | . 4898           | .12495      | .76010          | .36485       |
| .4849   | .12489      | .76488           | . 36001                 |   | .4899            | .12495      | .76000          | .36495       |
| . 4850  | .12489      | .76478           | .36011                  |   | .4900            | .12495      | .75990          | .36505       |

TABLE II. THREE-POINT INTERPOLATION COEFFICIENTS

| p                | <b>C</b> -1 | ů+               | <b>C</b> 1 + |
|------------------|-------------|------------------|--------------|
| . 4900           | .12495      | .75990           | . 36505      |
| . 4901           | .12495      | .75980           | .36515       |
| . 4902           | . 12495     | .75970           | . 36525      |
| . 4903           | . 12495     | .75960           | . 36 53 5    |
| . 49 04          | .12495      | .75950           | .36545       |
| . 4905           | . 12495     | .75940           | . 36555      |
| . 4906           | . 12496     | .75932           | . 36 56 4    |
| . 4907           | . 12496     | .75922           | . 36 57 4    |
| . 49 08          | .12496      | .75912           | . 36 58 4    |
| . 4909           | .12496      | .75902           | . 36 59 4    |
| <b>. 4</b> 910   | .12496      | .75892           | .36604       |
| . 4911           | .12496      | .75882           | .36614       |
| . 4912           | .12496      | .75872           | .36624       |
| .4913            | . 12496     | .75862           | .36634       |
| . 4914           | .12496      | .75852           | . 36644      |
| .4915            | .12496      | .75842           | .36654       |
| .4916            | .12496      | .75832           | .36664       |
| . 4917           | .12497      | .75824           | .36673       |
| . 4918<br>. 4919 | .12497      | .75814           | .36683       |
| . 4919           |             |                  | <del></del>  |
| . 4920           | .12497      | .75794           | .36703       |
| .4921            | .12497      | .75774           | .36723       |
| . 4923           | .12497      | .75764           | .36733       |
| . 4924           | .12497      | .75754           | .36743       |
| . 4925           | .12497      | .75744           | . 36753      |
| . 4926           | .12497      | .75734           | . 36763      |
| . 49 27          | .12497      | .75724           | .36773       |
| . 49 28          | .12497      | .75714           | .36783       |
| . 49 29          | .12497      | .75704           | .36793       |
| . 4930           | .12498      | .75696           | .36802       |
| . 4931           | .12498      | .75686           | .36812       |
| . 4932           | .12498      | .75676           | .36822       |
| . 49 33          | .12498      | .75666           | .36832       |
| . 4934           | .12498      | .75656           | . 368 42     |
| . 4935           | .12498      | .75646           | .36852       |
| . 4936           | .12498      | .75636           | .36862       |
| . 4937<br>. 4938 | .12498      | .75626<br>.75616 | .36872       |
| . 49 30          | .12498      | .75606           | .36892       |
| . 4940           | .12498      | .75596           | .36902       |
| . 49 41          | .12498      | .75586           | .36912       |
| . 49 42          | .12498      | .75576           | .36922       |
| . 4943           | .12498      | .75566           | . 36932      |
| . 49 44          | .12498      | .75556           | . 36942      |
| . 49 45          | .12498      | .75546           | . 369 52     |
| . 49 46          | .12499      | .75538           | .36961       |
| . 4947           | .12499      | .75528           | .36971       |
| . 49 48          | . 12499     | .75518           | .36981       |
| . 49 49          | .12499      | .75508           | .36991       |
| . 4950           | .12499      | .75498           | .37001       |

| P       | <b>C</b> -1      | <b>c</b> ₀<br>+  | <b>C</b> 1 + |
|---------|------------------|------------------|--------------|
| .4950   | .12499           | .75498           | .37001       |
| .4951   | .12499           | .75488           | .37011       |
| . 49 52 | . 12499          | .75478           | .37021       |
| .4953   | .12499           | .75468           | .37031       |
| .4954   | .12499           | .75458           | .37041       |
| . 49 55 | .12499           | .75448<br>.75438 | .37051       |
| .4957   | .12499           | .75428           | .37071       |
| 49 58   | .12499           | .75418           | .37081       |
| . 49 59 | .12499           | .75408           | .37091       |
| .4960   | .12499           | .7 5398          | .37101       |
| . 4961  | .12499           | .75388           | .37111       |
| .4962   | .12499           | .75378           | .37121       |
| . 4964  | .12499           | .75358           | .37141       |
| .4965   | .12499           | .75348           | .37151       |
| . 4966  | .12499           | .75338           | .37161       |
| .4967   | .12499           | .75328           | . 37 17 1    |
| . 4968  | .12499           | .75318<br>.75310 | .37181       |
| .4970   | .12500           | .75300           | .37200       |
| .4971   | .12500           | .75290           | .37210       |
| 4972    | .12500           | .75280           | .37 220      |
| .4973   | .12500           | .75270           | .37230       |
| . 4974  | .12500           | .75260           | .37240       |
| . 4975  | .12500           | .75250           | .37250       |
| .4976   | .12500           | .75240           | .37260       |
| 4978    | .12500           | .75230           | .37280       |
| .4979   | .12500           | .75210           | . 37 290     |
| . 4980  | .12500           | .75200           | . 37 300     |
| .4981   | .12500           | .75190           | .37310       |
| .4982   | .12500           | .75180           | .37320       |
| .4984   | .12500           | .75170           | .37330       |
| .4985   | .12500           | .75150           | .37350       |
| . 4986  | .12500           | .75140           | .37360       |
| . 4987  | .12500           | .75130           | .37370       |
| . 4988  | .12500           | .75120           | .37380       |
| . 4989  | .12500           | .75110           | .37390       |
| . 4990  | .12500           | .75100           | .37400       |
| .4991   | .12500           | .75090<br>.75080 | .37410       |
| .4993   | .12500           | .75070           | .37420       |
| .4994   | .12500           | .75060           | .37440       |
| . 4995  | .12500           | .75050           | .37450       |
| . 4996  | .12500           | .75040           | .37460       |
| .4997   | .12500           | .75030           | . 37470      |
| . 4998  | .12500<br>.12500 | .75020           | .37480       |
|         |                  | .75010           | .37490       |
| .5000   | .12500           | .75000           | .37500       |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <b>p</b><br>( <b>p&lt;.5</b> ) | <b>C</b> -1            | c <sub>°</sub>         | Cı<br>+                | C1                     | <i>p</i> ( <i>p</i> >.5) |
|--------------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| .000                           | .00000 00              | 1.00000 00             | .00000 00              | .00000 00              | 1.000                    |
| .001                           | .00033 28              | .99949 89              | .00100 06              | .00016 67              | . 999                    |
| .002                           | .00066 47              | .99899 61              | .00200 19              | .00033 33              | .998                     |
| .003                           | .00099 55              | .99849 10              | .00300 45              | .00050 00              | .997                     |
| .004                           | .00132 53              | .99798 39              | .00400 81              | .00066 67              | .996                     |
| .005                           | .00165 42              | .99747 51              | .00501 24              | .00083 33              | .995                     |
| .006                           | .00198 20              | .99696 40              | .00601 80              | .00100 00              | .994                     |
| .007                           | .00230 89              | .99645 12              | .00702 43              | .00116 66              | .993                     |
| .008                           | .00263 48              | .99593 64              | .00803 16<br>.00904 02 | .00133 32              | .992                     |
| .009                           | .00295 96              | .99541 93              |                        | .00149 99              | .991                     |
| .010                           | .00328 35              | .99490 05              | .01004 95              | .00166 65              | .990                     |
| .011                           | .00360 64              | .99437 97              | .01105 98              | .00183 31              | .989                     |
| .012                           | .00392 83              | .99385 69              | .01207 11              | .00199 97              | .988                     |
| .013                           | .00424 92              | .99333 21              | .01308 34              | .00216 63              | .987                     |
| .014                           | .00456 91              | .99280 53              | .01409 67              | .00233 29              | .986                     |
| .015<br>.016                   | .00488 81<br>.00520 60 | .99227 68<br>.99174 60 | .01511 07<br>.01612 60 | .00249 94<br>.00266 60 | .985                     |
|                                |                        |                        |                        | 1                      | i                        |
| .017<br>.018                   | .00552 30<br>.00583 90 | .99121 35<br>.99067 90 | .01714 20<br>.01815 90 | .00283 25<br>.00299 90 | .983<br>.982             |
| .019                           | .00615 40              | .99014 25              | .01917 70              | .00316 55              | .981                     |
| .020                           | .00646 80              | .98960 40              | .02019 60              | .00333 20              | .980                     |
| .021                           | .00678 10              | .98906 35              | .02121 60              | .00349 85              | .979                     |
| .021                           | .00709 31              | .98852 13              | .02121 60              | .00349 63              | .978                     |
| .023                           | .00740 42              | .98797 71              | .02325 84              | .00383 13              | .977                     |
| .024                           | .00771 43              | .98743 09              | .02428 11              | .00399 77              | .976                     |
| .025                           | .00802 34              | .98688 27              | .02530 48              | .00416 41              | .975                     |
| .026                           | .00833 16              | .98633 28              | .02632 92              | .00433 04              | .974                     |
| .027                           | .00863 88              | .98578 09              | .02735 46              | .00449 67              | .973                     |
| .028                           | .00894 50              | .98522 70              | .02838 10              | .00466 30              | .972                     |
| .029                           | .00925 02              | .98467 11              | .02940 84              | .00482 93              | .971                     |
| .030                           | .00955 45              | .98411 35              | .03043 65              | .00499 55              | .970                     |
| .031                           | .00985 78              | .98355 39              | .03146 56              | .00516 17              | .969                     |
| .032                           | .01016 01              | .98299 23              | .03249 57              | .00532 79              | ,968                     |
| .033                           | .01046 15              | .98242 90              | .03352 65              | .00549 40              | .967                     |
| .034                           | .01076 19              | .98186 37              | .03455 83              | .00566 01              | . 966                    |
| .035                           | .01106 13              | .98129 64              | .03559 11              | .00582 62              | .965                     |
| .036                           | .01135 98              | .98072 74              | .03662 46              | .00599 22              | .964                     |
| .037                           | .01165 73              | .98015 64              | .03765 91              | .00615 82              | .963                     |
| .038                           | .01195 38<br>.01224 94 | .97958 34<br>.97900 87 | .03869 46<br>.03973 08 | .00632 42<br>.00649 01 | .962<br>.961             |
|                                |                        |                        |                        |                        |                          |
| .040                           | .01254 40              | .97843 20              | .04076 80              | .00665 60              | .960                     |
| .041                           | .01283 77<br>.01313 03 | .97785 36              | .04180 59<br>.04284 51 | .00682 18              | .959                     |
| .042                           | .01342 21              | .97727 29<br>.97669 08 | .04284 51              | .00698 77              | .958<br>.957             |
| .044                           | .01371 29              | .97610 67              | .04492 53              | .00731 91              | .956                     |
| .045                           | .01400 27              | .97552 06              | .04492 33              | .00748 48              | .955                     |
| .046                           | .01429 16              | .97493 28              | .04700 92              | .00765 04              | .954                     |
| .047                           | .01457 95              | .97434 30              | .04805 25              | .00781 60              | .953                     |
| .048                           | .01486 64              | .97375 12              | .04909 68              | .00798 16              | .952                     |
| .049                           | .01515 24              | .97315 77              | .05014 18              | .00814 71              | .951                     |
| .050                           | .01543 75              | .97256 25              | .05118 75              | .00831 25              | .950                     |
|                                | _                      | +                      | +                      | _                      |                          |
|                                | C <sub>2</sub>         | <b>C</b> 1             | C <sub>0</sub>         | <b>C</b> -1            |                          |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| P                  |                        |                        |                        |                        |                          |
|--------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| ( <b>p&lt;.5</b> ) | C-1                    | ¢+                     | C <sub>1</sub><br>+    | C <sub>2</sub>         | <i>p</i> ( <i>p</i> >.5) |
| .050               | .01543 75              | .97256 25              | .05118 75              | .00831 25              | .950                     |
| .051               | .01572 16              | .97196 53              | .05223 42              | .00847 79              | .949                     |
| .052<br>.053       | .01600 48<br>.01628 70 | .97136 64<br>.97076 55 | .05328 16<br>.05433 00 | .00864 32<br>.00880 85 | .948                     |
| ,054               | .01656 82              | .97016 26              | .05537 94              | .00897 38              | .946                     |
| .055               | .01684 86              | .96955 83              | .05642 92              | .00913 89              | .945                     |
| .056               | .01712 79              | .96895 17              | .05738 03              | .00930 41              | . 944                    |
| .057               | .01740 64              | .96834 37              | .05853 18              | .00946 91              | .943                     |
| .058               | .01768 39              | .96773 37              | .05958 43              | .00963 41              | .942                     |
| .059               | .01796 04              | .96712 17              | .06063 78              | .00979 91              | .941                     |
| .060               | .01823 60              | .96650 80              | .06169 20              | .00996 40              | .940                     |
| .061               | .01851 07              | .96589 26              | .06274 69<br>.06380 28 | .01012 88<br>.01029 36 | .939                     |
| .062<br>.063       | .01878 44<br>.01905 72 | .96527 52<br>.96465 61 | .06485 94              | .01029 36              | .938<br>.937             |
| .064               | .01932 90              | .96403 50              | .06591 70              | .01062 30              | .936                     |
| .065               | .01959 99              | .96341 22              | .06697 53              | .01078 76              | .935                     |
| .066               | .01986 99              | .96278 77              | .06803 43              | .01095 21              | . 934                    |
| .067               | .02013 90              | .96216 15              | .06909 40              | .01111 65              | .933                     |
| .068<br>.069       | .02040 71<br>.02067 43 | .96153 33<br>.96090 34 | .07015 47<br>.07121 61 | .01128 09<br>.01144 52 | .932                     |
|                    |                        | .96027 15              |                        | .01160 95              |                          |
| .070<br>.071       | .02094 05              | .95963 79              | .07227 85              | .01177 37              | .930                     |
| .072               | .02120 38              | .95900 26              | .07440 54              | .01193 78              | .928                     |
| .073               | .02173 37              | .95836 56              | .07546 99              | .01210 18              | .927                     |
| .074               | .02199 62              | .95772 66              | .07653 54              | .01226 58              | . 926                    |
| .075               | .02225 78              | .95708 59              | .07760 16              | .01242 97              | .925                     |
| .076               | .02251 85              | .95644 35              | .07866 85              | .01259 35              | .924                     |
| .077<br>.078       | .02277 83              | .95579 94<br>.95515 33 | .07973 61<br>.08080 47 | .01273 72              | .923                     |
| .079               | .02303 11              | .95450 55              | .08187 40              | .01308 45              | .921                     |
| .080               | .02355 20              | .95385 60              | .08294 40              | .01324 80              | .920                     |
| .081               | .02380 81              | .95320 48              | .08401 47              | .01341 14              | .919                     |
| .082               | .02406 32              | .95255 16<br>.95189 70 | .08508 64<br>.08615 85 | .01357 48              | .918<br>.917             |
| .083<br>.084       | .02457 08              | .95124 04              | .08723 16              | .01373 00              | .916                     |
| .085               | .02482 32              | .95058 21              | .08830 54              | .01406 43              | .915                     |
| .086               | .02507 47              | .94992 21              | .08937 99              | .01422 73              | .914                     |
| .087               | .02532 53              | .94926 04              | .09045 51              | .01439 02              | .913                     |
| .088               | .02557 49              | .94859 67              | .09153 13              | .01455 31              | .912                     |
| .089               | .02582 37              | .94793 16              | .09260 79              | .01471 58              | .911                     |
| .090               | .02607 15              | .94726 45              | .09368 55              | .01487 85              | .910                     |
| .091               | .02631 84              | .94659 57              | .09476 38              | .01504 11              | .909                     |
| .092<br>.093       | .02656 44              | .94592 52<br>.94525 33 | .09584 28<br>.09692 22 | .01520 36<br>.01536 59 | .908                     |
| .094               | .02705 38              | .94457 94              | .09800 26              | .01552 82              | .906                     |
| .095               | .02729 71              | .94390 38              | .09908 37              | .01569 04              | .905                     |
| .096               | .02753 95              | .94322 65              | .10016 55              | .01585 25              | .904                     |
| .097               | .02778 09              | .94254 72              | .10124 83              | .01601 46              | .903                     |
| .098               | .02802 15              | .94186 65              | .10233 15              | .01617 65              | .902                     |
| .099               | .02826 12              | .94118 41              |                        |                        |                          |
| .100               | .02850 00              | .94050 00              | .10450 00<br>+         | .01650 00              | .900                     |
|                    | C <sub>2</sub>         | C <sub>1</sub>         | <b>C</b> ₀             | <b>C</b> <sub>-1</sub> | l                        |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <i>p</i> ( <i>p</i> <.5) | <b>C</b> -1            | <b>c</b> <sub>0</sub> + | Cı<br>+                | C <sub>2</sub>         | <i>p</i> ( <i>p</i> >.5) |
|--------------------------|------------------------|-------------------------|------------------------|------------------------|--------------------------|
| .100                     | .02850 00              | .94050 00               | . 10450 00             | .01650 00              | .900                     |
| . 101                    | .02873 79              | .93981 42               | .10558 53              | .01666 16              | .899                     |
| .102                     | .02897 49<br>.02921 10 | .93912 67               | .10667 13              | .01682 31              | .898                     |
| .103                     | .02921 10              | .93843 75<br>.93774 63  | .10775 80<br>.10884 57 | .01698 45              | .897<br>.896             |
| 105                      | .02944 01              | .93705 37               | . 10993 38             | .01730 71              | .895                     |
| .106                     | .02991 38              | .93635 94               | .11102 26              | .01746 82              | .894                     |
| .107                     | .03014 63              | .93566 34               | .11211 21              | .01762 92              | .893                     |
| .108                     | .03037 80<br>.03060 87 | .93496 60<br>.93426 66  | .11320 20<br>.11429 29 | .01779 00              | .892<br>.891             |
| .110                     | .03083 85              | .93356 55               | .11538 45              | .01811 15              | .890                     |
| .111                     | .03106 74              | .93286 27               | .11647 68              | .01827 21              | .889                     |
| .112                     | .03129 55              | .93215 85               | .11756 95              | .01843 25              | .888                     |
| .113                     | .03152 26              | .93145 23               | .11866 32              | .01859 29              | .887                     |
| .114                     | .03174 89              | .93074 47               | .11975 73              | .01875 31              | .886                     |
| .115                     | .03197 43<br>.03219 88 | .93003 54               | .12085 21<br>.12194 76 | .01891 32              | .885<br>.884             |
| .117                     | .03242 24              | .92932 44               | .12304 38              | .01907 32              | .883                     |
| .118                     | .03264 52              | .92789 76               | . 12414 04             | .01939 28              | .882                     |
| .119                     | .03286 70              | .92718 15               | .12523 80              | .01955 25              | .881                     |
| .120                     | .03308 80              | .92646 40               | . 12633 60             | .01971 20              | .880                     |
| .021                     | .03330 81              | .92574 48               | . 12743 47             | .01987 14              | .879                     |
| .121                     | .03352 73<br>.03374 56 | .92502 39<br>.92430 13  | .12853 41<br>.12963 42 | .02003 07              | .878<br>.877             |
| .124                     | .03396 31              | .92357 73               | .13073 47              | .02034 89              | .876                     |
| . 125                    | .03417 97              | .92285 16               | .13183 59              | .02050 78              | .875                     |
| .126                     | .03439 54              | .92212 42               | .13293 78              | .02066 66              | .874                     |
| .127                     | .03461 02              | .92139 51               | .13404 04              | .02082 53              | .873                     |
| .128                     | .03482 42<br>.03503 73 | .92066 46<br>.91993 24  | .13514 34<br>.13624 71 | .02098 38<br>.02114 22 | .872<br>.871             |
| .130                     | .03524 95              | .91919 85               | .13735 15              | .02130 05              | .870                     |
| .131                     | .03546 08              | .91846 29               | .13845 66              | .02145 87              | .869                     |
| .132                     | .03567 13              | .91772 59               | .13956 21              | .02161 67              | .968                     |
| .133                     | .03588 09              | .91698 72               | .14066 83              | .02177 46              | .867                     |
| .134                     | .03608 97<br>.03629 76 | .91624 71<br>.91550 53  | .14177 49<br>.14288 22 | .02193 23              | .866<br>.865             |
| .136                     | .03650 46              | .91476 18               | .14399 02              | .02224 74              | .864                     |
| .137                     | .03671 07              | .91401 66               | .14509 89              | .02240 48              | .863                     |
| .138                     | .03691 60              | .91327 00               | .14620 80              | .02256 20              | .862                     |
| .139                     | .03712 04              | .91252 17               | .14731 78              | .02271 91              | .861                     |
| .140                     | .03732 40              | .91177 20               | .14842 80              | .02287 60              | .860                     |
| .141                     | .03772 85              | .91102 06<br>.91026 75  | .15065 05              | .02303 28              | .859<br>.858             |
| .143                     | .03792 95              | .90951 30               | .15176 25              | .02334 60              | .857                     |
| .144                     | .03812 97              | .90875 71               | .15287 49              | .02350 23              | .856                     |
| .145                     | .03832 89<br>.03852 74 | .90799 92<br>.90724 02  | .15398 83<br>.15510 18 | .02365 86              | .855<br>.854             |
| .147                     | .03872 49              | .90647 92               | .15621 63              | .02397 06              | .853                     |
| . 148                    | .03892 16              | .90571 68               | .15733 12              | .02412 64              | .852                     |
| .149                     | .03911 75              | .90495 30               | .15844 65              | .02428 20              | .851                     |
| .150                     | .03931 25              | .90418 75               | .15956 25              | .02443 75              | .850                     |
|                          | _                      | +                       | +                      |                        |                          |
| L                        | C <sub>2</sub>         | <b>C</b> 1              | C <sub>0</sub>         | <b>C</b> -1            |                          |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <i>p</i> ( <i>p</i> <.5) | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+        | <b>C</b> 1 +           | C <sub>2</sub>         | <i>p</i> ( <i>p</i> >.5) |
|--------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| .150                     | .03931 25              | .90418 75              | .15956 25              | .02443 75              | .850                     |
| .151                     | .03950 67              | .90342 06              | .16067 89              | .02459 28              | .849                     |
| . 152                    | .03970 00              | .90265 20              | .16179 60              | .02474 80              | .848                     |
| .153                     | .03989 24              | .90188 17              | .16291 38              | .02490 31              | .847                     |
| .154                     | .04008 40              | .90111 00              | .16403 20              | .02505 80              | .846                     |
| .155                     | .04027 48              | .90033 69              | .16515 06              | .02521 27              | .845                     |
| . 156                    | .04046 47              | .89956 21              | .16626 99              | .02536 73              | .844                     |
| .157                     | .04065 38<br>.04084 21 | .89878 59<br>.89800 83 | .16738 96<br>.16850 97 | .02552 17<br>.02567 59 | .843                     |
| .159                     | .04102 94              | .89722 87              | .16963 08              | .02583 01              | .841                     |
| .160                     | .04121 60              | .89644 80              | .17075 20              | .02598 40              | .840                     |
| .161                     | .04140 17              | .89566 56              | .17187 39              | .02613 78              | .839                     |
| .162                     | .04158 66              | .89488 18              | . 17299 62             | .02629 14              | .838                     |
| .163                     | .04177 06              | .89409 63              | .17411 92              | .02644 49              | .837                     |
| .164                     | .04195 38              | .89330 94              | .17524 26              | .02659 82              | .836                     |
| .165                     | .04213 62              | .89252 11              | .17636 64              | .02675 13              | .835                     |
| . 166                    | .04231 77              | .89173 11              | .17749 09              | .02690 43              | .834                     |
| .167                     | .04249 84              | .89093 97              | .17861 58              | .02705 71              | .833                     |
| .168                     | .04267 83<br>.04285 73 | .89014 69<br>.88935 24 | .17974 11<br>.18086 71 | .02720 97<br>.02736 22 | .832<br>.831             |
|                          |                        |                        |                        |                        |                          |
| .170                     | .04303 55              | .88855 65              | .18199 35              | .02751 45              | .830                     |
| .171                     | .04321 29              | .88775 92              | .18312 03              | .02766 66              | .829                     |
| .172                     | .04338 94<br>.04356 51 | .88696 02<br>.88615 98 | .18424 78<br>.18537 57 | .02781 86<br>.02797 04 | .828<br>.827             |
| .174                     | .04374 00              | .88535 80              | .18650 40              | .02812 20              | .826                     |
| .175                     | .04374 00              | .88455 48              | .18763 27              | .02827 34              | .825                     |
| .176                     | .04408 73              | .88374 99              | .18876 21              | .02842 47              | .824                     |
| .177                     | .04425 97              | .88294 36              | .18989 19              | .02857 58              | .823                     |
| .178                     | .04443 13              | .88213 59              | .19102 21              | .02872 67              | .822                     |
| .179                     | .04460 21              | .88132 68              | . 19215 27             | .02887 74              | .821                     |
| .180                     | .04477 20              | .88051 60              | .19328 40              | .02902 80              | .820                     |
| .181                     | .04494 11              | .87970 38              | .19441 57              | .02917 84              | .819                     |
| .182                     | .04510 94<br>.04527 69 | .87889 02<br>.87807 52 | .19554 78<br>.19668 03 | .02932 86<br>.02947 86 | .818<br>.817             |
| 1                        |                        | .87725 88              | .19781 32              | .02962 84              | .816                     |
| . 184                    | .04544 36<br>.04560 94 | .87644 07              | .19894 68              | .02902 84              | .815                     |
| .186                     | .04577 45              | .87562 15              | .20008 05              | .02992 75              | .814                     |
| .187                     | .04593 87              | .87480 06              | .20121 49              | .03007 68              | .813                     |
| .188                     | .04610 21              | .87397 83              | .20234 97              | .03022 59              | .812                     |
| . 189                    | .04626 47              | .87315 46              | .20348 49              | .03037 48              | .811                     |
| .190                     | .04642 65              | .87232 95              | .20462 05              | .03052 35              | .810                     |
| . 191                    | .04658 75              | .87150 30              | . 20575 65             | .03067 20              | .809                     |
| .192                     | .04674 76              | .87067 48              | .20689 32              | .03082 04              | .808                     |
| .193                     | .04690 70              | .86984 55              | . 20803 00             | .03096 85              | .807                     |
| .194                     | .04706 56              | .86901 48              | .20916 72              | .03111 64              | .806                     |
| .195                     | .04722 33<br>.04738 03 | .86818 24<br>.86734 89 | .21030 51<br>.21144 31 | .03126 42              | .805<br>.804             |
| .197                     | .04753 64              | .86651 37              | .21258 18              | .03155 91              | .803                     |
| .198                     | .04769 17              | .86567 71              | .21372 09              | .03170 63              | .802                     |
| .199                     | .04784 63              | .86483 94              | .21486 01              | .03185 32              | .801                     |
| •200                     | .04800 00              | .86400 00              | .21600 00              | .33200 00              | .800                     |
|                          | _                      | +                      | +                      | _                      |                          |
|                          | C <sub>2</sub>         | <b>C</b> 1             | C <sub>0</sub>         | <b>C</b> -1            |                          |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <i>p</i> ( <i>p</i> <.5) | <b>C</b> _1            | <b>c</b> ₀<br>+        | <b>c</b> ı<br>+        | C:          | <i>p</i> ( <i>p</i> >.5) |
|--------------------------|------------------------|------------------------|------------------------|-------------|--------------------------|
| . 200                    | .04800 00              | .86400 00              | .21600 00              | .03200 00   | .800                     |
| . 201                    | .04815 29              | .86315 92              | .21714 03              | .03214 66   | .799                     |
| .202                     | .04830 51              | .86231 73              | .21828 07              | .03229 29   | .798                     |
| .203                     | .04845 64              | .86147 37              | .21942 18              | .03243 91   | .797                     |
| .204<br>.205             | .04860 69<br>.04875 67 | .86062 87<br>.85978 26 | .22056 33<br>.22170 49 | .03258 51   | .796<br>.795             |
| .206                     | .04890 56              | .85893 48              | .22284 72              | .03213 64   | .794                     |
| .207                     | .04905 38              | .85808 59              | .22398 96              | .03302 17   | .793                     |
| .208                     | .04920 12              | .85723 56              | .22513 24              | .03316 68   | .792                     |
| .209                     | .04934 77              | .85638 36              | .22627 59              | .03331 18   | .791                     |
| .210                     | .04949 35              | .85553 05              | .22741 95              | .03345 65   | .790                     |
| .211                     | .04963 85              | .85467 60              | .22856 35              | .03360 10   | .789                     |
| .212                     | .04978 27              | .85382 01              | .22970 79              | .03374 53   | .788                     |
| .213                     | .04992 61              | .85296 28              | .23085 27              | .03388 94   | .787                     |
| .214                     | .05006 87<br>.05021 06 | .85210 41<br>.85124 43 | .23199 79<br>.23314 32 | .03403 33   | .786<br>.785             |
| .216                     | .05035 16              | .85038 28              | . 23428 92             | .03432 04   | .784                     |
| .217                     | .05049 19              | .84952 02              | .23543 53              | .03446 36   | .783                     |
| .218                     | .05063 14              | .84865 62              | .23658 18              | .03460 66   | .782                     |
| .219                     | .05077 01              | .84779 08              | .23772 87              | .03474 94   | .781                     |
| . 220                    | .05090 80              | .84692 40              | .23887 60              | .03489 20   | .780                     |
| .221                     | .05104 51              | .84605 58              | . 24002 37             | .03503 44   | .779                     |
| .222                     | .05118 15              | .84518 65              | .24117 15              | .03517 65   | .778                     |
| .223                     | .05131 71              | .84431 58              | .24231 97              | .03531 84   | .777                     |
| .224                     | .05145 19<br>.05158 59 | .84344 37<br>.84257 02 | .24346 83<br>.24461 73 | .03546 01   | .776<br>.775             |
| .226                     | .05171 92              | .84169 56              | .24576 64              | .03574 28   | .774                     |
| .227                     | .05185 17              | .84081 96              | . 24691 59             | .03588 38   | .773                     |
| . 228                    | .05198 34              | .83994 22              | .24806 58              | .03602 46   | .772                     |
| .229                     | .05211 43              | .83906 34              | .24921 61              | .03616 52   | .771                     |
| .230                     | .05224 45              | .83818 35              | . 25036 65             | .03630 55   | .770                     |
| .231                     | .05237 39              | .83730 22              | .25151 73              | .03644 56   | .769                     |
| .232                     | .05250 25              | .83641 95              | .25266 85              | .03658 55   | .768                     |
| .233                     | .05263 04              | .83553 57              | .25381 98              | .03672 51   | .767                     |
| .234                     | .05275 75<br>.05288 38 | .83465 05<br>.83376 39 | .25497 15<br>.25612 36 | .03686 45   | .766<br>.765             |
| .235                     | .05300 94              | .83287 62              | .25727 58              | .03714 26   | .764                     |
| .237                     | .05313 42              | .83198 71              | .25842 84              | .03728 13   | .863                     |
| . 238                    | .05325 82              | .83109 66              | .25958 14              | .03741 98   | .762                     |
| .239                     | .05338 15              | .83020 50              | .26073 45              | .03755 80   | .761                     |
| . 240                    | .05350 40              | .82931 20              | .26188 80              | .03769 60   | .760                     |
| .241                     | .05362 58              | .82841 79              | .26304 16              | .03783 37   | .759                     |
| . 242                    | .05374 67              | .82752 21              | . 26419 59             | .03797 13   | .758                     |
| . 243                    | .05386 70              | .82662 55              | .26535 00              | .03810 85   | .757                     |
| . 244                    | .05398 65<br>.05410 52 | .82572 75<br>.82482 81 | .26650 45<br>.26765 94 | .03824 55   | .756<br>.755             |
| .246                     | .05422 32              | .82392 76              | . 26881 44             | .03851 88   | .754                     |
| .247                     | .05434 04              | .82302 57              | .26996 98              | .03865 51   | .753                     |
| .248                     | .05445 68              | .82212 24              | .27112 56              | .03879 12   | .752                     |
| .249                     | .05457 25              | .82121 80              | .27228 15              | .03892 70   | .751                     |
| • 250                    | .05468 75              | .82031 25              | .27343 75              | .03906 25   | .750                     |
|                          | _<br>C:                | +                      | +                      | _           |                          |
|                          | C <sub>2</sub>         | C <sub>1</sub>         | Co                     | <b>C</b> -1 |                          |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <i>p</i> ( <i>p</i> <.5) | <b>C</b> _1            | <b>c</b> <sub>0</sub> + | <b>c</b> ı<br>+        | <u>C</u> 2                          | <i>p</i> ( <i>p</i> >.5) |
|--------------------------|------------------------|-------------------------|------------------------|-------------------------------------|--------------------------|
| .250                     | .05468 75              | .82031 25               | .27343 75              | .03906 25                           | .750                     |
| .251                     | .05480 17              | .81940 56               | .27459 39              | .03919 78                           | .749                     |
| . 252                    | .05491 52              | .81849 76               | .27575 04              | .03933 28                           | .748                     |
| .253                     | .05502 79              | .81758 82               | .27690 73              | .03946 76                           | .747                     |
| .254                     | .05513 98<br>.05525 11 | .81667 74<br>.81576 58  | .27806 46<br>.27922 17 | .03960 22<br>.03973 64              | .746<br>.745             |
| .256                     | .05536 15              | .81485 25               | .28037 95              | .03987 05                           | .744                     |
| .257                     | .05547 13              | .81393 84               | .28153 71              | .04000 42                           | .743                     |
| .258                     | .05558 03              | .81302 29               | .28269 51              | .04013 77                           | .742                     |
| .259                     | .05568 85              | .81210 60<br>.81118 80  | .28385 35<br>.28501 20 | .04027 10                           | .741                     |
| .260                     | .05590 28              | .81026 89               | .28617 06              | .04053 67                           | .739                     |
| .262                     | .05600 88              | .80934 84               | .28732 96              | .04066 92                           | .738                     |
| .263                     | .05611 41              | .80842 68               | .28848 87              | .04080 14                           | .737                     |
| .264                     | .05621 86              | .80750 38               | .28964 82              | .04093 34                           | .736                     |
| .265                     | .05632 24<br>.05642 55 | .80657 97<br>.80565 45  | .29080 78<br>.29196 75 | .04106 51<br>.04119 65              | .735<br>.734             |
| .267                     | .05652 79              | .80472 82               | .29312 73              | .04117 05                           | .733                     |
| .268                     | .05662 95              | .80380 05               | . 29428 75             | .04145 85                           | .732                     |
| .269                     | .05673 04              | .80287 17               | .29544 78              | .04158 91                           | .731                     |
| .270                     | .05683 05              | .80194 15               | .29660 85              | .04171 95                           | .730                     |
| .271                     | .05692 99              | .80101 02               | .29776 93              | .04184 96                           | .729                     |
| .272                     | .05702 86<br>.05712 66 | .80007 78<br>.79914 43  | .29893 02<br>.30009 12 | .04197 94                           | .728                     |
| .274                     | .05722 38              | .79820 94               | .30125 26              | .04223 82                           | .726                     |
| .275                     | .05732 03              | .79727 34               | .30241 41              | .04236 72                           | .725                     |
| .276                     | .05741 61              | .79633 63               | .30357 57              | .04249 59                           | .724                     |
| .277                     | .05751 12              | .79539 81               | .30473 74              | .04262 43                           | .723                     |
| .278                     | .05760 55<br>.05769 91 | .79445 85<br>.79351 78  | .30589 95<br>.30706 17 | .04275 25                           | .722                     |
| .280                     | .05779 20              | .79257 60               | .30822 40              | .04300 80                           | .720                     |
| .281                     | .05788 42              | .79163 31               | .30938 64              | .04313 53                           | .719                     |
| .282                     | .05797 56              | .79068 88               | .31054 92              | .04326 24                           | .718                     |
| .283                     | .05806 64              | .78974 37               | .31171 18              | .04351 56                           | .716                     |
| .284                     | .05815 64<br>.05824 57 | .78784 96               | .31403 79              | .04364 18                           | .715                     |
| .286                     | .05833 43              | .78690 09               | .31520 11              | .04376 77                           | .714                     |
| .287                     | .05842 22              | .78595 11               | .31636 44              | .04389 33                           | .713                     |
| .288                     | .05850 93              | .78499 99<br>.78404 79  | .31752 81<br>.31869 16 | .04401 87 <sup>1</sup><br>.04414 37 | .712                     |
| .289                     | .05859 58              |                         |                        |                                     | <del></del>              |
| .290                     | .05876 65              | .78309 45<br>.78214 00  | .31985 55              | .04426 85                           | .710                     |
| .291                     | .05885 08              | .78118 44               | .32218 36              | .04451 72                           | .708                     |
| .293                     | .05893 45              | .78022 80               | .32334 75              | .04464 10                           | .707                     |
| .294                     | .05901 74              | .77927 02               | .32451 18              | .04476 46                           | .706                     |
| .295                     | .05909 96              | .77831 13               | .32567 62<br>.32684 07 | .04488 79                           | .705                     |
| .296                     | .05918 11              | .77638 99               | .32800 56              | .04501 09                           | .703                     |
| .298                     | .05934 19              | .77542 77               | .32917 03              | .04525 61                           | .702                     |
| .299                     | .05942 13              | .77446 44               | .33033 51              | .04537 82                           | .701                     |
| . 300                    | .05950 00              | .77350 00               | .33150 00              | .04550 00                           | .700                     |
|                          | -                      | +                       | +                      | _                                   |                          |
|                          | C <sub>2</sub>         | C <sub>1</sub>          | C <sub>0</sub>         | <b>C</b> -1                         |                          |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <i>p</i> ( <i>p</i> <.5) | <b>C</b> -1            | <b>c</b> <sub>°</sub> + | <b>C</b> 1 +           | C <sub>2</sub>         | <i>p</i> ( <i>p</i> >.5) |
|--------------------------|------------------------|-------------------------|------------------------|------------------------|--------------------------|
| . 300                    | .05950 00              | .77350 00               | .33150 00              | .04550 00              | .700                     |
| .301                     | .05957 80              | .77253 45               | .33266 50              | .04562 15              | .699                     |
| . 302                    | .05965 53              | .77156 79               | .33383 01              | .04574 27              | .698                     |
| .303                     | .05973 19              | .77060 02               | .33499 53              | .04586 36              | . 697                    |
| .304                     | .05980 77              | .76963 11               | .33616 09              | .04598 43              | . 696                    |
| .305                     | .05988 29              | .76866 12               | .33732 63              | .04610 46              | .695                     |
| .306                     | .05995 74              | .76769 02               | .33849 18              | .04622 46              | . 694                    |
| .307                     | .06003 12              | .76671 81               | .33965 74<br>.34082 28 | .04634 43              | .693                     |
| .308                     | .06010 44<br>.06017 68 | .76574 52<br>.76477 09  | .34198 86              | .04658 27              | .692<br>.691             |
| .310                     | .06024 85              | .76379 55               | .34315 45              | .04670 15              | .690                     |
| .311                     |                        | .76281 90               | .34432 05              | .04682 00              |                          |
| .311                     | .06031 95<br>.06038 99 | .76184 17               | .34548 63              | .04693 81              | .689<br>.688             |
| .313                     | .06045 95              | .76086 30               | .34665 25              | .04705 60              | .687                     |
| .314                     | .06052 85              | .75988 35               | .34781 85              | .04717 35              | . 686                    |
| .315                     | .06059 68              | .75890 29               | .34898 46              | .04729 07              | .685                     |
| .316                     | .06066 44              | .75792 12               | .35015 08              | .04740 76              | . 684                    |
| .317                     | .06073 13              | .75693 84               | .35131 71              | .04752 42              | .683                     |
| .318                     | .06079 76              | .75595 48               | .35248 32              | .04764 04              | . 682                    |
| . 319                    | .06086 31              | .75496 98               | .35364 97              | .04775 64              | .681                     |
| . 320                    | .06092 80              | .75398 40               | .35481 60              | .04787 20              | .680                     |
| . 321                    | .06099 22              | .75299 71               | .35598 24              | .04798 73              | . 679                    |
| . 322                    | .06105 57              | .75200 91               | .35714 89              | .04810 23              | .678                     |
| .323                     | .06111 85              | .75102 00               | .35831 55              | .04821 70              | .677                     |
| . 324                    | .06118 07              | .75003 01               | . 35948 19             | .04833 13              | . 676                    |
| .325                     | .06124 22              | .74903 91               | .36064 84              | .04844 53              | .675                     |
| . 326                    | .06130 30              | .74804 70               | .36181 50              | .04855 90              | .674                     |
| .327                     | .06136 31              | .74705 38               | .36298 17              | .04867 24              | .673                     |
| .328                     | .06142 26<br>.06148 14 | .74605 98<br>.74506 47  | .36414 82<br>.36531 48 | .04878 54              | .672<br>.671             |
| .330                     | .06153 95              | .74406 85               | .36648 15              | .04901 05              | .670                     |
|                          |                        | .74307 12               | .36764 83              | .04912 26              | .669                     |
| .331                     | .06159 69<br>.06165 37 | .74207 31               | .36881 49              | .04912 20              | .668                     |
| .333                     | .06170 98              | .74107 39               | .36998 16              | .04934 57              | .667                     |
| .334                     | .06176 53              | .74007 39               | .37114 81              | .04945 67              | .666                     |
| .335                     | .06182 01              | .73907 28               | .37231 47              | .04956 74              | .665                     |
| .336                     | .06187 42              | .73807 06               | .37348 14              | .04967 78              | .664                     |
| .337                     | .06192 76              | .73706 73               | .37464 82              | .04978 79              | .663                     |
| .338                     | .06198 04              | .73606 32               | .37581 48              | .04989 76              | .662                     |
| . 339                    | .06203 25              | .73505 80               | .37698 15              | .05000 70              | .661                     |
| . 340                    | .06208 40              | .73405 20               | .37814 80              | .05011 60              | . 660                    |
| .341                     | .06213 48              | .73304 49               | .37931 46              | .05022 47              | .659                     |
| .342                     | .06218 49              | .73203 67               | .38048 13              | .05033 31              | .658                     |
| .343                     | .06223 44              | .73102 77               | .38164 78              | .05044 11              | .657                     |
| . 344                    | .06228 33              | .73001 79               | .38281 41              | .05054 87              | . 656                    |
| . 345                    | .06233 14              | .72900 67               | .38398 08              | .05065 61              | .655                     |
| . 346                    | .06237 90              | .72799 50               | .38514 70              | .05076 30              | .654                     |
| .347                     | .06242 58              | .72698 19               | .38631 36              | .05086 97              | .653                     |
| .348                     | .06247 20              | .72596 80               | .38748 00<br>.38864 62 | .05097 60<br>.05108 19 | .652                     |
|                          | .06251 76              | .72495 33               |                        |                        | .651                     |
| .350                     | .06256 25              | .72393 75               | .38981 25              | .05118 75              | .650                     |
|                          | -                      | +                       | +                      | -                      |                          |
| L                        | <b>C</b> <sub>2</sub>  | C <sub>1</sub>          | C <sub>0</sub>         | <b>C</b> -1            |                          |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <b>p</b> (p<.5) | <b>C</b> <sub>-1</sub> | <b>c</b> ₀<br>+        | <b>C</b> <sub>1</sub> + | <b>C</b> <sub>2</sub>  | <b>p</b> ( <b>p</b> >. <b>5</b> ) |
|-----------------|------------------------|------------------------|-------------------------|------------------------|-----------------------------------|
| .350            | .06256 25              | .72393 75              | .38981 25               | .05118 75              | .650                              |
| .351            | .06260 68              | .72292 09              | .39097 86               | .05129 27              | .649                              |
| .352            | .06265 04              | .72190 32              | .39214 48               | .05139 76              | .648                              |
| .353            | .06269 33              | .72088 44              | .39331 11               | .05150 22              | .647                              |
| .354            | .06273 56<br>.06277 73 | .71986 48<br>.71884 44 | .39447 72<br>.39564 31  | .05160 64<br>.05171 02 | .646                              |
| .356            | .06281 83              | .71782 29              | .39680 91               | .05181 37              | .644                              |
| .357            | .06285 87              | .71680 06              | .39797 49               | .05191 68              | .643                              |
| . 358           | .06289 85              | .71577 75              | .39914 05               | .05201 95              | .642                              |
| .359            | .06293 75              | .71475 30              | .40030 65               | .05212 20              | .641                              |
| .360            | .06297 60              | .71372 80              | .40147 20               | .05222 40              | .640                              |
| . 361           | .06301 38              | .71270 19              | .40263 76               | .05232 57              | .639                              |
| .362            | .06305 10<br>.06308 75 | .71167 50<br>.71064 70 | .40380 30<br>.40496 85  | .05242 70<br>.05252 80 | .638<br>.637                      |
| .364            | .06312 34              | .70961 82              | .40613 38               | .05262 86              | .636                              |
| .365            | .06312 34              | .70858 86              | .40729 89               | .05272 88              | .635                              |
| .366            | .06319 33              | .70755 79              | .40846 41               | .05282 87              | . 634                             |
| .367            | .06322 73              | .70652 64              | .40962 91               | .05292 82              | .633                              |
| .368            | .06326 07              | .70549 41              | .41079 39               | .05302 73              | .632                              |
| . 369           | .06329 34              | .70446 07              | .41195 88               | .05312 61              | .631                              |
| .370            | .06332 55              | .70342 65              | .41312 35               | .05322 45              | .630                              |
| .371            | .06335 70              | .70239 15              | .41428 80               | .05332 25              | .629                              |
| .372            | .06338 78<br>.06341 80 | .70135 54<br>.70031 85 | .41545 26<br>.41661 70  | .05342 02<br>.05351 75 | .628<br>.627                      |
| .374            | .06344 76              | .69928 08              | .41778 12               | .05361 44              | .626                              |
| 375             | .06347 66              | .69824 23              | .41894 52               | .05371 09              | .625                              |
| .376            | .06350 49              | .69720 27              | .42010 93               | .05380 71              | .624                              |
| .377            | .06353 26              | .69616 23              | .42127 32               | .05390 29              | .623                              |
| .378            | .06355 97              | .69512 11              | .42243 69               | .05399 83              | .622                              |
| . 379           | .06358 62              | .69407 91              | .42360 04               | .05409 33              | .621                              |
| .380            | .06361 20              | .69303 60              | .42476 40               | .05418 80              | .620                              |
| .381            | .06363 72              | .69199 21              | .42592 74               | .05428 23              | .619<br>.618                      |
| .382            | .06366 18<br>.06368 58 | .69094 74<br>.68990 19 | .42709 06<br>.42825 36  | .05446 97              | .617                              |
| .384            | .06370 92              | .68885 56              | .42941 64               | .05456 28              | .616                              |
| . 385           | .06373 19              | .68780 82              | .43057 93               | .05465 56              | .615                              |
| . 386           | .06375 41              | .68676 03              | .43174 17               | .05474 79              | .614                              |
| .387            | .06377 56              | .68571 13              | .43290 42               | .05483 99              | .613                              |
| . 388           | .06379 65              | .68466 15              | .43406 65               | .05493 15              | .612                              |
| .389            | .06381 68              | 68361 09               | .43522 86<br>.43639 05  | .05502 27              | .611<br>.610                      |
| .390            | .06383 65              | .68255 95              |                         |                        |                                   |
| .391            | .06385 56<br>.06387 40 | .68150 73<br>.68045 40 | .43755 22<br>.43871 40  | .05520 39              | .609<br>.608                      |
| .392            | .06389 19              | .67940 02              | .43987 53               | .05538 36              | .607                              |
| .394            | .06390 92              | .67834 56              | .44103 64               | .05547 28              | .606                              |
| .395            | .06392 58              | .67728 99              | .44219 76               | .05556 17              | .605                              |
| .396            | .06394 19              | .67623 37              | .44335 83               | .05565 01              | .604                              |
| .397            | .06395 73              | .67517 64              | .44451 91               | .05573 82              | .603                              |
| .398            | .06397 21<br>.06398 64 | .67411 83<br>.67305 97 | .44567 97<br>.44683 98  | .05582 59              | .602<br>.601                      |
| .399            |                        | .67200 00              | .44800 00               | .05600 00              |                                   |
| .400            | .06400 00              |                        |                         | . 03000 00             | .600                              |
|                 | C <sub>1</sub>         | +<br>C <sub>1</sub>    | <b>+ c</b> ₀            | <b>C</b> <sub>-1</sub> |                                   |
|                 |                        | <u> </u>               |                         | <u> </u>               | L                                 |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| <b>p</b><br>( <b>p&lt;.5</b> ) | C-1                    | <b>c</b> ₀<br>+        | C <sub>1</sub>         | C <sub>2</sub>         | <i>p</i> ( <i>p</i> >. <b>5</b> ) |
|--------------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------------------|
| .400                           | .06400 00              | .67200 00              | .44800 00              | .05600 00              | .600                              |
| . 401                          | .06401 30              | .67093 95              | .44916 00              | .05608 65              | . 599                             |
| .402                           | .06402 55              | .66987 85              | . 45031 95             | .05617 25              | .598                              |
| . 403                          | .06403 73              | .66881 64              | .45147 91              | .05625 82              | .597                              |
| .404                           | .06404 85<br>.06405 92 | .66775 35              | .45263 85              | .05634 35              | .596                              |
| . 405<br>. 406                 | .06406 92              | .66669 01<br>.66562 56 | .45379 74<br>.45495 64 | .05642 83<br>.05651 28 | .595<br>.594                      |
| . 407                          | .06407 87              | .66456 06              | .45611 49              | .05659 68              | .593                              |
| .407                           | .06408 76              | .66349 48              | .45727 32              | .05668 04              | .592                              |
| .409                           | .06409 58              | .66242 79              | .45843 16              | .05676 37              | .591                              |
| .410                           | .06410 35              | .66136 05              | . 45958 95             | .05684 65              | . 590                             |
| .411                           | .06411 06              | .66029 23              | .46074 72              | .05692 89              | . 589                             |
| .412                           | .06411 71              | .65922 33              | .46190 47              | .05701 09              | . 588                             |
| .413                           | .06412 30              | .65815 35              | .46306 20              | .05709 25              | . 587                             |
| .414                           | .06412 83              | .65708 29              | .46421 91              | .05717 37              | . 586                             |
| .415                           | .06413 31              | .65601 18              | .46537 57              | .05725 44              | . 585                             |
| .416                           | .06413 72              | .65493 96              | .46653 24              | .05733 48              | . 58 4                            |
| .417                           | .06414 08              | .65386 69              | .46768 86              | .05741 47              | .583                              |
| .418<br>.419                   | .06414 38<br>.06414 62 | .65279 34<br>.65171 91 | .46884 46<br>.47000 04 | .05749 42<br>.05757 33 | .582<br>.581                      |
| .420                           | .06414 80              | .65064 40              | .47115 60              | .05765 20              | .580                              |
|                                |                        | <del></del>            | .47231 14              | .05773 03              | . 579                             |
| .421                           | .06414 92<br>.06414 99 | .64956 81<br>.64849 17 | .47346 63              | .05780 81              | .578                              |
| .423                           | .06415 00              | .64741 45              | .47462 10              | .05788 55              | .577                              |
| . 424                          | .06414 95              | .64633 65              | .47577 55              | .05796 25              | .576                              |
| .425                           | .06414 84              | .64525 77              | .47692 98              | .05803 91              | .575                              |
| . 426                          | .06414 68              | .64417 84              | .47808 36              | .05811 52              | .574                              |
| . 427                          | .06414 46              | .64309 83              | .47923 72              | .05819 09              | . 573                             |
| .428                           | .06414 18              | .64201 74              | . 48039 06             | .05826 62              | .572                              |
| .429                           | .06413 84              | .64093 57              | .48154 38              | .05834 11              | .571                              |
| .430                           | .06413 45              | .63985 35              | . 48269 65             | .05841 55              | .570                              |
| .431                           | .06413 00              | .63877 05              | .48384 90              | .05848 95              | .569                              |
| . 432<br>. 433                 | .06412 49<br>.06411 93 | .63768 67<br>.63660 24 | .48500 13<br>.48615 31 | .05856 31              | .568<br>.567                      |
| . 434                          | .06411 31              | .63551 73              | .48730 47              | .05870 89              | .566                              |
| .435                           | .06410 63              | .63443 14              | .48845 61              | .05878 12              | . 565                             |
| . 436                          | .06409 90              | .63334 50              | .48960 70              | .05885 30              | .564                              |
| . 437                          | .06409 11              | .63225 78              | .49075 77              | .05892 44              | .563                              |
| . 438                          | .06408 26              | .63116 98              | .49190 82              | .05899 54              | .562                              |
| . 439                          | .06407 36              | .63008 13              | .49305 82              | .05906 59              | .561                              |
| . 440                          | .06406 40              | .62899 20              | .49420 80              | .05913 60              | . 560                             |
| . 441                          | .06405 39              | .62790 22              | . 49535 73             | .05920 56              | .559                              |
| . 442                          | .06404 31              | .62681 13              | .49650 67              | .05927 49              | . 558                             |
| .443                           | .06403 19              | .62572 02              | . 49765 53             | .05934 36              | .557                              |
| . 444                          | .06402 01              | .62462 83              | .49880 37              | .05941 19              | .556                              |
| . 445<br>. 446                 | .06400 77<br>.06399 48 | .62353 56<br>.62244 24 | .49995 19<br>.50109 96 | .05947 98              | . 555<br>. 554                    |
| . 447                          | .06398 13              | .62134 84              | .50224 71              | .05954 12              | .553                              |
| . 448                          | .06396 72              | .62025 36              | .50339 44              | .05961 42              | .552                              |
| . 449                          | .06395 26              | .61915 83              | .50454 12              | .05974 69              | .551                              |
| . 450                          | .06393 75              | .61806 25              | .50568 75              | .05981 25              | . 550                             |
|                                | -                      | +                      | +                      | -                      |                                   |
|                                | C <sub>2</sub>         | <b>C</b> ,             | <b>C</b> ₀             | <b>C</b> -1            |                                   |

TABLE III. FOUR-POINT INTERPOLATION COEFFICIENTS

| P                  | <b>C</b> -1            | <b>C</b> <sub>0</sub>  | <b>C</b> <sub>1</sub>  | C <sub>1</sub>         | P _                |
|--------------------|------------------------|------------------------|------------------------|------------------------|--------------------|
| ( <b>p&lt;.5</b> ) | -                      | +                      | +                      |                        | ( <b>p&gt;.5</b> ) |
| .450               | .06393 75              | .61806 25              | .50568 75              | .05981 25              | .550               |
| .451<br>.452       | .06392 18<br>.06390 56 | .61696 59              | .50683 36              | .05987 77              | . 549              |
| .453               | .06388 88              | .61586 88<br>.61477 09 | .50797 92<br>.50912 46 | .05994 24              | .548<br>.547       |
| .454               | .06387 14              | .61367 22              | .51026 98              | .06007 06              | .546               |
| .455               | .06385 36              | .61257 33              | .51141 42              | .06013 39              | .545               |
| .456               | .06383 51              | .61147 33              | .51255 87              | .06019 69              | . 544              |
| .457               | .06381 62              | .61037 31              | .51370 24              | .06025 93              | . 543              |
| .458               | .06379 67              | .60927 21              | .51484 59              | .06032 13<br>.06038 29 | .542               |
| .459               | .06377 66<br>.06375 60 | .60817 03<br>.60706 80 | .51598 92<br>.51713 20 | .06044 40              | .541<br>.540       |
| .461               | .06373 49              | .60596 52              | .51827 43              | .06050 46              | .539               |
| 462                | .06371 32              | .60486 16              | .51941 64              | .06056 48              | .538               |
| .463               | .06369 10              | .60375 75              | .52055 80              | .06062 45              | .537               |
| .464               | .06366 82              | .60265 26              | .52169 94              | .06068 38              | .536               |
| .465               | .06364 49<br>.06362 11 | .60154 72<br>.60044 13 | .52284 03<br>.52398 07 | .06074 26<br>.06080 09 | .535<br>.534       |
| . 466              |                        | .59933 49              |                        |                        | .533               |
| .467               | .06359 68<br>.06357 19 | .59822 77              | .52512 06<br>.52626 03 | .06085 87<br>.06091 61 | .532               |
| .469               | .06354 65              | .59712 00              | .52739 95              | .06097 30              | .531               |
| .470               | .06352 05              | .59601 15              | .52853 85              | .06102 95              | .530               |
| . 471              | .06349 40              | .59490 25              | .52967 70              | .06108 55              | .529               |
| .472               | .06346 70              | .59379 30              | .53081 50              | .06114 10              | .528               |
| .473               | .06343 95              | .59268 30              | .53195 25              | .06119 60              | .527               |
| .474               | .06341 14              | .59157 22<br>.59046 09 | .53308 98<br>.53422 66 | .06125 06<br>.06130 47 | .526<br>.525       |
| .476               | .06335 37              | .58934 91              | .53536 29              | .06135 83              | .524               |
| .477               | .06332 41              | . 58823 68             | .53649 87              | .06141 14              | .523               |
| .478               | .06329 39              | .58712 37              | .53763 43              | .06146 41              | .522               |
| .479               | .06326 32              | .58601 01              | .53876 94              | .06151 63              | .521               |
| .480               | .06323 20              | .58489 60              | .53990 40              | .06156 80              | .520               |
| .481               | .06320 03              | .58378 14              | .54103 81              | .06161 92              | .519               |
| .482               | .06316 80<br>.06313 53 | .58266 60<br>.58155 04 | .54217 20<br>.54330 51 | .06167 00<br>.06172 02 | .518               |
| .484               | .06310 20              | .58043 40              | .54443 80              | .06177 00              | .516               |
| .485               | .06306 82              | .57931 71              | .54557 04              | .06181 93              | .515               |
| . 486              | .06303 39              | .57819 97              | .54670 23              | .06186 81              | .514               |
| .487               | .06299 91              | .57708 18              | .54783 37              | .06191 64              | .513               |
| .488               | .06296 37              | .57596 31<br>.57484 42 | .54896 49<br>.55009 53 | .06196 43              | .512               |
| .490               | .06292 79              | .57372 45              | .55122 55              | .06201 18              | .511               |
| .490               | .06285 46              | .57260 43              | .55235 52              | .06210 49              | .509               |
| .491               | .06281 72              | .57148 36              | .55348 44              | .06215 08              | .508               |
| . 493              | .06277 94              | .57036 27              | .55461 28              | .06219 61              | . 507              |
| . 494              | .06274 10              | .56924 10              | .55574 10              | .06224 10              | .506               |
| .495               | .06270 21              | .56811 88              | .55686 87              | .06228 54              | .505               |
| .496               | .06266 27              | .56699 61              | .55799 59              | .06232 93              | .504               |
| .497               | .06262 27<br>.06258 23 | .56587 26<br>.56474 89 | .55912 29<br>.56024 91 | .06237 28              | .503               |
| .499               | .06254 14              | .56362 47              | .56137 48              | .06245 81              | .501               |
| .500               | .06250 00              | .56250 00              | .56250 00              | .06250 00              | . 500              |
|                    | -                      | +                      | +                      | _                      |                    |
|                    | C <sub>2</sub>         | C <sub>1</sub>         | C <sub>0</sub>         | <b>C</b> -1            |                    |

## TABLE IV SIX-POINT INTERPOLATION COFFFICIENTS

| $(\mathbf{p}, \mathbf{q})$ | 1.00          | .98<br>.97                                      | જું <i>જું</i> કું                            | .93<br>.92<br>.91                            | <b>8</b> .   | .89<br>.88<br>.87                               | <b>%</b> :&: <b>%</b>                           | .83<br>.82<br>.83                               | 8.           | .79<br>.78<br>.77                            |
|----------------------------|---------------|---|---|--|--------------|---|---|---|--------------|--|
| <b>ü</b> +                 | 00000 00000   | .00033 32917<br>.00066 63334<br>.00099 88752    | .00133 06675<br>.00166 14609<br>.00199 10065  | .00231 90557<br>.00264 53606<br>.00296 96742 | .00329 17500 | .00361 13426<br>.00392 82074<br>.00424 21011    | .00455 27815<br>.00486 00078<br>.00516 35405    | .00546 31416<br>.00575 85746<br>.00604 96051    | .00633 60000 | .00661 75284<br>.00689 39614<br>.00716 50719 |
| បូ                         | 00000 00000   | .00250 38746<br>.00501 43268<br>.00752 95923    | .01004 78976<br>.01256 74609<br>.01508 64924  | .01760 31946<br>.02011 57632<br>.02262 23873 | .02512 12500 | .02761 05290<br>.03008 83968<br>.03255 30217    | .03500 25676<br>.03743 51953<br>.03984 90624    | .04224 23240<br>.04461 31332<br>.04695 96417    | .04928 00000 | .05157 23583<br>.05383 48668<br>.05606 56760 |
| <b>ΰ</b> +                 | 00000 00000   | .01006 60817<br>.02026 19736<br>.03058 41170    | .04102 89152<br>.05159 .77344<br>.06227 19048 | .07306 27217<br>.08396 14464<br>.09496 43071 | .10606 75000 | . 11726 71904<br>. 12855 95136<br>. 13994 05758 | . 15140 64552<br>. 16295 32031<br>. 17457 68448 | . 18627 33805<br>. 19803 87864<br>. 20986 90158 | .22176 00000 | .23370 76492<br>.24570 78536<br>.25775 64845 |
| ů+                         | 1.00000 00000 | . 99654 20858<br>. 99283 67064<br>. 98888 64505 | .98469 39648<br>.98026 19531<br>.97559 31752  | .97069 04458<br>.96555 66336<br>.96019 46604 | .95460 75000 | . 94879 81771<br>. 94276 97664<br>. 93652 53917 | .93006 82248<br>.92340 14844<br>.91652 84352    | .90945 23870<br>.90217 66936<br>.89470 47517    | .88704 00000 | .87918 59183<br>.87114 60264<br>.86292 38830 |
| ا 5                        | 00000 00000   | .00493 33767<br>.00973 36932<br>.01440 12590    | .01893 64224<br>.02333 95703<br>.02761 11276  | .03175 15567<br>.03576 13568<br>.03964 10640 | .04339 12500 | .04701° 25223<br>.05050 55232<br>.05387 09296   | .05710 94524<br>.06022 18359<br>.06320 88576    | .06607 13273<br>.06881 00868<br>.07142 60096    | .07392 00000 | .07629 29929<br>.07854 59532<br>.08067 98752 |
| -5+                        | 00000 00000   | .00049 57921<br>.00098 30066<br>.00146 14086    | .00193 07725<br>.00239 08828<br>.00284 15335  | .00328 25281<br>.00371 36794<br>.00413 48096 | .00454 57500 | .00494 63412<br>.00533 64326<br>.00571 58827    | .00608 45585<br>.00644 23359<br>.00678 90995    | .00712 47422<br>.00744 91654<br>.00776 22787    | .00806 40000 | .00835 42553<br>.00863 29786<br>.00890 01118 |
| ( <b>p</b> <.5)            | 8.            | 0.<br>0.<br>0.<br>0.                            | <u> </u>                                      | 79.89.                                       | .10          | 1.22.13   | 45  | 1   | .20          | 22:<br>23:                                   |

|  | ···   | <sub>7</sub>   | <del></del>  |          |
|--|---|--|--|----------|
| 5. 5. 8.8.5. 8.8.2.  |   | 8.5. 8.5.5.<br>8.5. 8.5.5.2.   | .53  |          |
| .00943 30086<br>.00866 75509<br>.00889 52500<br>.00911 58993<br>.00932 92954<br>.00953 52378<br>.00973 35295 | .01028 05783<br>.01044 63626<br>.01060 35618                                      | .01089 15052<br>.01102 19094<br>.01114 30487<br>.01125 47635<br>.01135 68984<br>.01144 93025       | .01153 18292<br>.01160 43366<br>.01166 66877<br>.01171 87500     | +<br>C-2 |
| .06667 9632<br>.06868 14710<br>.07063 87500<br>.07254 96127<br>.07441 22368<br>.07622 48054<br>.07798 55076  |   | .08870 75421<br>.08998 90068<br>.09120 26598<br>.09234 67776<br>.09341 96484<br>.09441 95724       | .09534 48621<br>.09619 38432<br>.09696 48548<br>.09765 62500     | <b>-</b> |
| .34310 2500<br>.34310 2500<br>.34310 2500<br>.35538 79579<br>.36768 39936<br>.37998 63433<br>.39229 07352    | . 42917 33480<br>. 42917 33480<br>. 44144 30664<br>. 45369 33833<br>. 46592 00000 | .47811 86167<br>.49028 49336<br>.50241 46520<br>.51450 34752<br>.52654 71094<br>.53854 12648       | . 55048 16567<br>. 56236 40064<br>. 57418 40421<br>. 58593 75000 | + °°     |
| .81920 65536<br>.80996 76929<br>.80057 25000<br>.79102 48096<br>.78132 84864<br>.77148 74242<br>.76150 55448 | .73075 46195<br>.72024 92136<br>.70962 29842<br>.69888 00000                      | .68802 43508<br>.67706 01464<br>.66599 15155<br>.65482 26048<br>.64355 75781<br>.63220 06152       | .62075 59108<br>.60922 76736<br>.59762 01254<br>.58593 75000     | + ʊ      |
| .09237 37500<br>.09237 37500<br>.09359 45385<br>.09470 64832<br>.09571 08458                                 | .09867 85435<br>.09916 47468<br>.09955 14258<br>.09984 00000                      | . 10003 19092<br>. 10012 86132<br>. 10013 15915<br>. 10004 23424<br>. 09986 23828<br>. 09959 32476 | . 09923 64892<br>. 09879 36768<br>. 09826 63965<br>. 09765 62500 | ا ا ن    |
| .01026 04314<br>.01025 72328<br>.01044 22500<br>.01077 69446<br>.01092 66459<br>.01106 46105                 | 3 5 5 7 3   | .01170 49786<br>.01175 06306<br>.01178 50351<br>.01180 82765<br>.01182 04453                       | .01181 19546<br>.01179 15034<br>.01176 03961<br>.01171 87500     | + ű      |
| 1888 8 EEEE 4.88   | 8. 13. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14                                     | ±44 444  | . 49<br>. 50   |          |

TABLE V EIGHT-POINT INTERPOLATION COEFFICIENTS

| d  | ا ن            | <u>;</u> +  | ا د-1          | ů+             | <b>บี</b> +    | űΙ  | <b>ü</b> +     | ₫              |
|----|----------------|---|----------------|----------------|----------------|---|----------------|----------------|
| -  | .00088 64212 5 | .00088 64212 5 .00915 96862 5 .05   | .05246 00212 5 | .96176 70562 5 | .10686 30062 5 | 5246 00212 5 .96176 70562 5 .10686 30062 5 .03037 15912 5 .00663 28762 5 .00070 45912 5 | .00663 28762 5 | .00070 45912 5 |
| .2 | .00160 51200 0 | .00160 51200 0 .01634 30400 0 .08988 67200 0 .89886 72000 0 .22471 68000 0 .05992 44800 0 .01284 09600 0 .00135 16800 0 | .08988 67200 0 | .89886 72000 0 | .22471 68000 0 | .05992 44800 0  | .01284 09600 0 | .00135 16800 0 |
| .3 | .00211 57987 5 | .00211 57987 5 .02124 99787 5 .1  |                | .81458 25187 5 | .34910 67937 5 | 1278 83487 5 .81458 25187 5 .34910 67937 5 .08624 99137 5 .01810 18337 5 .00188 70637 5 | .01810 18337 5 | .00188 70637 5 |
| 4. | .00239 61600 0 | .00239 61600 0 .02376 19200 0 .12220 41600 0 .71285 76000 0 .47523 84000 0 .10692 86400 0 .02193 40800 0 .00226 30400 0 | .12220 41600 0 | .71285 76000 0 | .47523 84000 0 | .10692 86400 0  | .02193 40800 0 | .00226 30400 0 |
| 5. | .00244 14062 5 | .00244 14062 5 .02392 57812 5 .1  |                | .59814 45312 5 | .59814 45312 5 | 1962 89062 5 .59814 45312 5 .59814 45312 5 .11962 89062 5 .02392 57812 5 .00244 14062 5 | .02392 57812 5 | .00244 14062 5 |
| 9. | .00226 30400 0 | .00226 30400 0 .02193 40800 0   | .10692 86400 0 | .47523 84000 0 | .71285 76000 0 | 0692 86400 0 .47523 84000 0 .71285 76000 0 .12220 41600 0 .02376 19200 0 .00239 61600 0 | .02376 19200 0 | .00239 61600 0 |
| .7 | .00188 70637 5 | .00188 70637 5 .01810 18337 5 .08624 99137 5 .34910 67937 5 .81458 25187 5 .11278 83487 5 .02124 99787 5 .00211 57987 5 | .08624 99137 5 | .34910 67937 5 | .81458 25187 5 | .11278 83487 5  | .02124 99787 5 | .00211 57987 5 |
| 8. | .00135 16800 0 | 00135 16800 0 .01284 09600 0 .05992 44800 0 .22471 68000 0 .89886 72000 0 .08988 67200 0 .01634 30400 0 .00160 51200 0  | .05992 44800 0 | .22471 68000 0 | .89886 72000 0 | .08988 67200 0  | .01634 30400 0 | .00160 51200 0 |
| 6. | .00070 45912 5 | .00070 45912 5 .00663 28762 5 .03037 15912 5 .10686 30062 5 .96176 70562 5 .05246 00212 5 .00915 96862 5 .00088 64212 5 | .03037 15912 5 | .10686 30062 5 | .96176 70562 5 | .05246 00212 5  | .00915 96862 5 | .00088 64212 5 |

## TABLE VI SUPPLEMENT

Inverse interpolation maximal errors in  $\lambda\!/\!\sqrt{n}$  when P , approximately as recorded, is the argument for n's as shown

|  | 1   | 2   | 3   | 4   | <i>5</i>                                 | 6  | 7  |
|--|---|---|---|---|--|--|--|
|  | P=.58                                     | P=.74                                     | P=.82                                     | P=.87                                     | P=.91                                    | P=.93                                    | P=.95                                    |
| ε <sup>- 11</sup> =<br>ε <sup>- 111</sup> =                      | .0007<br>.0001                            | .0006                                     | .0021                                     | .0037<br>.0018                            | .0055                                    | .0075                                    | .0097<br>large                           |
|  | P=.30                                     | P=.33                                     | P=.35                                     | P=.35                                     | P=.36                                    | P=.36                                    | P=.36                                    |
| E -     =<br>E -       =   | .0013<br>.0002                            | .0015                                     | .0017                                     | .0019                                     | .0021                                    | .0023<br>.0012                           | .0025<br>.0013                           |
|  | P=.12                                     | P=.09                                     | P=.07                                     | P=.05                                     | P=.03                                    | P=.03                                    | P=.02                                    |
| E - 11 =<br>E - 111 =  | .0018                                     | .0028                                     | .0037                                     | .0045                                     | .0053                                    | .0060                                    | .0066<br>.0028                           |
|  |   |   |   |   |  |  |  |
| 8  | 9   | 10  | 12  | <i>15</i>                                 | 19                                       | 24                                       | <i>30</i>                                |
| <b>8</b><br>P=.80  | <b>9</b><br>P=.82                         | <b>10</b> P=.84                           | <b>12</b><br>P=.86                        | <b>15</b><br>P=. 89                       | <b>19</b><br>P=.92                       | <b>24</b><br>P=.94                       | <b>30</b><br>P=.96                       |
| _  | _   |   |   |   |  |  |  |
| P=.80<br>E <sup>-11</sup> = .0033                                | P=.82<br>.0040                            | P=.84<br>.0047                            | P=.86<br>.0063                            | P=.89<br>.0089                            | P=.92<br>.013                            | P=.94<br>.019                            | P=.96<br>.027                            |
| P=.80<br>E <sup>-11</sup> = .0033<br>E <sup>-111</sup> = .0019   | P=.82<br>.0040<br>.0024                   | P=.84<br>.0047<br>.0031                   | P=.86<br>.0063<br>.0048                   | P=.89<br>.0089<br>large                   | P=.92<br>.013<br>large                   | P=.94<br>.019<br>large                   | P=.96<br>.027<br>large                   |
| $P=.80$ $E^{-11}=.0033$ $E^{-111}=.0019$ $P=.36$ $E^{-11}=.0027$ | P=.82<br>.0040<br>.0024<br>P=.36<br>.0028 | P=.84<br>.0047<br>.0031<br>P=.36<br>.0030 | P=.86<br>.0063<br>.0048<br>P=.36<br>.0034 | P=.89<br>.0089<br>large<br>P=.35<br>.0038 | P=.92<br>.013<br>large<br>P=.35<br>.0044 | P=.94<br>.019<br>large<br>P=.34<br>.0051 | P=.96<br>.027<br>large<br>P=.33<br>.0060 |

Table Giving P, — the probability that, for a given n, a diver-

| n,—Number of de  |                |                  |                  |                |                 |                |   |                  |
|------------------|----------------|------------------|------------------|----------------|-----------------|----------------|---|------------------|
| χ/√n             | $\chi^2/n$     | 1                | 2                | 3              | 4               | 5              | 6                                       | 7                |
| .0               | .00            | 1.0000           | 1.0000           | 1.0000         | 1.0000          | 1.0000         | 1.0000                                  | 1.0000           |
| .1               | .01            | .9203            | .9900            | .9986          | .9998           | 1.0000-        | 1.0000-                                 | 1.0000           |
| .2<br>.3         | .04<br>.09     | .8415<br>.7642   | .9608<br>.9139   | .9893<br>.9656 | .9970<br>.9856  | .9991<br>.9938 | .9997<br>.9973                          | .9999<br>.9988   |
| .4               | .16            | .6892            | .8521            | .9233          | .9585           | .9770          | .9871                                   | .9927            |
| .5               | .25            | .6171            | .7788            | .8614          | .9098           | .9400          | .9595                                   | .9724            |
| .6               | .36            | .5485            | .6977            | .7819          | .8372           | .8761          | .9044                                   | .9256            |
| .7<br>.8         | .49<br>.64     | . 4839<br>. 4237 | .6126<br>.5273   | .6892<br>.5892 | .7431<br>.6339  | .7840<br>.6692 | .8164<br>.6983                          | .8426<br>.7232   |
| .9               | .81            | .3681            | .4449            | .4881          | .5185           | . 5423         | .5619                                   | .5788            |
| 1.0              | 1.00           | .3173            | .3679            | .3916          | . 4060          | .4159          | .4232                                   | . 4289           |
| 1.1              | 1.21           | .2713<br>.2301   | . 2982<br>. 2369 | .3043<br>.2289 | .3041<br>.2178  | .3014<br>.2062 | .2975<br>.1949                          | . 2930<br>. 1841 |
| 1.2              | 1.44           | .1936            | .1845            | .1667          | .1491           | .1331          | .1189                                   | .1063            |
| 1.4              | 1.96           | .1615            | .1409            | .1176          | .0976           | .0811          | .0675                                   | .0564            |
| 1.5<br>1.6       | 2.25<br>2.56   | .1336<br>.1096   | . 1054<br>. 0773 | .0803<br>.0531 | .0611<br>.0366  | .0466<br>.0253 | .0358<br>.0176                          | .0275<br>.0123   |
| 1.7              | 2.89           | .0891            | .0556            | .0340          | .0209           | .0130          | .0081                                   | .0051            |
| 1.8              | 3.24           | .0719            | .0392            | .0211          | .0115           | .0063          | .0035                                   | .0019            |
| 1.9              | 3.61           | .0574            | .0271            | .0127          | .0060           | .0029          | .0014                                   | .0007            |
| 2.0              | 4.00           | .0455            | .0183            | .0074          | .0030           | .0013          | .0005                                   | .0002            |
| 2.1<br>2.2       | 4.41<br>4.84   | .0357<br>.0278   | .0122<br>.0079   | .0042<br>.0023 | .0014<br>.0007  | .0005          | .0002<br>.0001                          | .000             |
| 2.3              | 5.29           | .0214            | .0050            | .0012          | .0003           | .0001          | .0000+                                  | .0000            |
| 2.4              | 5.76           | .0164            | .0032            | .0006          | .0001           | .0000+         |   |                  |
| 2.5<br>2.6       | 6.25           | .0124            | .0019<br>.0012   | .0003<br>.0001 | .0001<br>.0000+ |                |   |                  |
| 2.7              | 7.29           | .0069            | .0007            | .0001          | , ,             |                |   |                  |
| 2.8              | 7.84           | .0051            | .0004            | .0000+         |                 |                |   |                  |
| 2.9              | 8.41           | .0037            | .0002            |                |                 |                |   |                  |
| 3.0              | 9.00           | .0027            | .0001            |                |                 |                |   |                  |
| 3.1<br>3.2       | 9.61<br>10.24  | .0014            | .0000+           |                |                 |                |   |                  |
| 3.3              | 10.89          | .0010            | ·                |                |                 |                |   |                  |
| 3.4<br>3.5       | 11.56<br>12.25 | .0007            |                  |                |                 |                |   |                  |
| 3.6              | 12.96          | .0003            |                  |                |                 |                |   |                  |
| 3.7              | 13.69          | .0002            |                  |                |                 |                |   |                  |
| 3.8<br>3.9       | 14.44<br>15.21 | .0001<br>.0001   |                  |                |                 |                |   |                  |
| 4.0              | 16.00          | .0001            |                  |                |                 |                |   |                  |
| 4.1              | 16.81          | .0000+           |                  |                |                 |                |   |                  |
| $\bar{n} = .5$   | 11             | .0008            | .0005            | .0017          | .0027           | .0035          | .0041                                   | .004             |
| n5               | E 111 =        | .000+            | 0002             | .0002          | .0002           | .0001          | .0003                                   | .000             |
|                  |                |                  |                  |                | • • • • •       |                | • | •000             |
| $\sqrt{n} = 1.$  | 0 E 11=        | .0006            | .0011            | .0015          | .0019           | .0024          | .0029                                   | .003             |
| _*               | F       =      | 000±             | 0001             | 0000           | 0000            | 0005           | 0001                                    |                  |
|                  | <b>▶</b> ∷ ≡   | .000+            | .0001            | .0002          | .0003           | .0005          | .0006                                   | .0008            |
|                  | E 11=          | .0004            | .0008            | .0010          | .0011           | .0011          | .0011                                   | .001             |
| $\sqrt{n} = 1$ . | 5 111 =        | .000+            | .0001            | .0001          | .0002           | .0003          | .0003                                   | .000             |
|                  | Ε              | . 500            |                  | Page 202       |                 |                |   |                  |

VI gence as great as  $\chi^2$  will arise as a matter of chance

|  | grees of f                    | reedom                      |                               |                                  |                                  |                                  |                                  |                               |
|--|-------------------------------|-----------------------------|-------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-------------------------------|
|  | 8                             | 9                           | 10                            | 12                               | 15                               | 19                               | 24                               | 30                            |
|  | 1.0000                        | 1.0000                      | 1.0000                        | 1.0000                           | 1.0000                           | 1.0000                           | 1.0000                           | 1.0000                        |
|  | 1.0000 —<br>1.0000 —<br>.9995 | 1.0000-<br>1.0000-<br>.9998 | 1.0000 —<br>1.0000 —<br>.9999 | 1.0000 —<br>1.0000 —<br>1.0000 — | 1.0000 —<br>1.0000 —<br>1.0000 — | 1.0000 —<br>1.0000 —<br>1.0000 — | 1.0000 —<br>1.0000 —<br>1.0000 — | 1.0000-<br>1.0000-<br>1.0000- |
|  | .9958<br>.9810<br>.9417       | .9976<br>.9869<br>.9540     | . 9986<br>. 9909<br>. 9636    | .9995<br>.9956<br>.9770          | .9999<br>.9985<br>.9882          | 1.0000-<br>.9996<br>.9950        | 1.0000-<br>.9999<br>.9983        | 1.0000-<br>1.0000-<br>.9995   |
|  | .8643<br>.7447<br>.5937       | .8824<br>.7637<br>.6070     | .8978<br>.7806<br>.6191       | .9221<br>.8096<br>.6406          | .9472<br>.8441<br>.6676          | .9680<br>.8787<br>.6975          | .9825<br>.9098<br>.7281          | .9913<br>.9357<br>.7583       |
|  | .4335                         | .4373                       | . 4405                        | . 4457                           | .4514                            | .4568                            | .4616                            | .4657                         |
|  | .2882<br>.1740<br>.0952       | .2833<br>.1644<br>.0853     | . 2784<br>. 1555<br>. 0766    | .2687<br>.1394<br>.0620          | .2549<br>.1188<br>.0454          | .2378<br>.0965<br>.0304          | .2187<br>.0752<br>.0186          | .1984<br>.0589<br>.0118       |
|  | .0472<br>.0212<br>.0087       | .0395<br>.0164<br>.0061     | .0332<br>.0128<br>.0043       | .0236<br>.0077<br>.0022          | .0143<br>.0037<br>.0008          | .0074<br>.0014<br>.0002          | .0035<br>.0004<br>.0000+         | .0013<br>.0001<br>.0000+      |
|  | .0032<br>.0011<br>.0003       | .0020<br>.0006<br>.0002     | .0013<br>.0004<br>.0001       | .0005<br>.0001<br>.0000+         | .0001<br>.0000+                  | .0000+                           |                                  |                               |
|  | .0001                         | .0000+                      | .0000+                        |                                  |                                  |                                  |                                  |                               |
| •  | .0000+                        | •                           |                               |                                  |                                  |                                  |                                  |                               |
| $\sqrt{n} = .7 \frac{E'}{E'}$                      | i= .0038<br>ii=.0007          | .0047<br>.0006              | .0055<br>.0004                | .0071<br>.0001                   | .0092<br>.0007                   | .011<br>.0018                    | .014<br>.0033                    | .015<br>.0046                 |
| $\sqrt{n} = 1.0 \frac{\epsilon^{1}}{\epsilon^{1}}$ | i= .0039<br>ii =.0010         | .0044<br>.0012              | .0049                         | .0060<br>.0019                   | .0075                            | .0097                            | .012<br>.0047                    | .016<br>.0064                 |
| $\sqrt{n} = 1.3 \frac{\epsilon^3}{\epsilon}$       | .0027<br>    =.0011           | .0028                       | .0029                         | .0028<br>.0010                   | .0028<br>.0014                   | .0021<br>.0016                   | .0015<br>large                   | .0011<br>large                |

For inverse two- and three-point interpolation errors, see page 201

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | <sup>3</sup> √N          | √10N                     | <sup>3</sup> √100 N      | log N                    |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.00         | 1.0000 000               | 3.1622 777               | 1.0000 000               | 2.1544 347               | 4.6415 888               | .0000 0000               |
| 1.01         | 1.0049 876               | 3.1780 497               | 1.0033 223               | 2.1615 923               | 4.6570 095               | .0099 5033               |
| 1.02         | 1.0099 505               | 3.1937 439<br>3.2093 613 | 1.0066 227<br>1.0099 016 | 2.1687 029<br>2.1757 671 | 4.6723 287<br>4.6875 481 | .0198 0263<br>.0295 5880 |
| 1.03         | 1.0148 892<br>1.0198 039 | 3.2249 031               | 1.0033 010               | 2.1737 871               | 4.7026 694               | .0392 2071               |
| 1.05         | 1.0246 951               | 3.2403 703               | 1.0163 964               | 2.1897 596               | 4.7176 940               | .0487 9016               |
| 1.06         | 1.0295 630               | 3.2557 641               | 1.0196 128               | 2.1966 892               | 4.7326 235               | .0582 6891               |
| 1.07         | 1.0344 080               | 3.2710 854               | 1.0228 091               | 2.2035 755               | 4.7474 594               | .0676 5865               |
| 1.08<br>1.09 | 1.0392 305<br>1.0440 307 | 3.2863 353<br>3.3015 148 | 1.0259 856<br>1.0291 425 | 2.2104 189<br>2.2172 202 | 4.7622 032<br>4.7768 562 | .0769 6104<br>.0861 7770 |
| 1.10         | 1.0488 088               | 3.3166 248               | 1.0322 801               | 2.2239 801               | 4.7914 199               | 0953 1018                |
| 1.11         | 1.0535 654               | 3.3316 662               | 1.0353 988               | 2.2306 991               | 4.8058 955               | .1043 6002               |
| 1.12         | 1.0583 005               | 3.3466 401               | 1.0384 988               | 2.2373 779               | 4.8202 845               | .1133 2869               |
| 1.13         | 1.0630 146               | 3.3615 473               | 1.0415 804               | 2.2440 170               | 4.8345 881               | .1222 1763               |
| 1.14         | 1.0677 078               | 3.3763 886<br>3.3911 650 | 1.0446 439<br>1.0476 896 | 2.2506 171<br>2.2571 787 | 4.8488 076<br>4.8629 441 | .1310 2826<br>.1397 6194 |
| 1.15         | 1.0770 330               | 3.4058 773               | 1.0507 176               | 2.2637 024               | 4.8769 990               | .1484 2001               |
| 1.17         | 1.0816 654               | 3.4205 263               | 1.0537 282               | 2.2701 887               | 4.8909 732               | .1570 0375               |
| 1.18         | 1.0862 780               | 3.4351 128               | 1.0567 218               | 2.2766 381               | 4.9048 681               | .1655 1444               |
| 1.20         | 1.0908 712               | 3.4496 377               | 1.0596 985               | 2.2830 512<br>2.2894 285 | 4.9186 847               | 1739 5331                |
| 1.21         | 1.0954 451               | 3.4641 016<br>3.4785 054 | 1.0626 586<br>1.0656 022 | 2.2957 704               | 4.9324 241<br>4.9460 874 | .1823 2156<br>.1906 2036 |
| 1.22         | 1.1045 361               | 3.4928 498               | 1.0685 297               | 2.3020 775               | 4.9596 757               | .1988 5086               |
| 1.23         | 1.1090 537               | 3.5071 356               | 1.0714 413               | 2.3083 502               | 4.9731 898               | .2070 1417               |
| 1.24         | 1.1135 529               | 3.5213 634               | 1.0743 371               | 2.3145 891               | 4.9866 310               | .2151 1138               |
| 1.25         | 1.1180 340               | 3.5355 339<br>3.5496 479 | 1.0772 173               | 2.3207 944<br>2.3269 668 | 5.0000 000<br>5.0132 979 | .2231 4355<br>.2311 1172 |
| 1.27         | 1.1269 428               | 3.5637 059               | 1.0829 321               | 2.3331 066               | 5.0265 257               | .2390 1690               |
| 1.28         | 1.1313 708               | 3.5777 088               | 1.0857 670               | 2.3392 142               | 5.0396 842               | .2468 6008               |
| 1.29         | 1.1357 817               | 3 5916 570               | 1.0885 872               | 2.3452 901               | 5.0527 743               | .2546 4222               |
| 1.30         | 1.1401 754               | 3.6055 513               | 1.0913 929               | 2.3513 347               | 5.0657 970               | .2623 6426               |
| 1.31         | 1.1445 523               | 3.6193 922<br>3.6331 804 | 1.0941 842               | 2.3573 484<br>2.3633 315 | 5.0787 531<br>5.0916 434 | .2700 2714<br>.2776 3174 |
| 1.33         | 1.1532 563               | 3.6469 165               | 1.0997 244               | 2.3692 845               | 5.1044 687               | .2851 7 94               |
| 1.34         | 1.1575 837               | 3.6606 010               | 1.1024 738               | 2.3752 077               | 5.1172 299               | .2926 6961               |
| 1.35         | 1.1618 950               | 3.6742 346               | 1.1052 094               | 2.3811 016               | 5.1299 278               | .3038 0145               |
| 1.36         | 1.1661 904               | 3.6878 178               | 1.1079 317               | 2.3869 664               | 5.1425 632               | .3074 8470               |
| 1.37         | 1.1704 700<br>1.1747 340 | 3.7013 511<br>3.7148 351 | 1.1106 405<br>1.1133 363 | 2.3928 025<br>2.3986 103 | 5.1551 367<br>5.1676 493 | .3148 1074<br>.3220 8350 |
| 1.39         | 1.1789 826               | 3.7282 704               | 1.1160 190               | 2.4043 901               | 5.1801 015               | .3293 0375               |
| 1.40         | 1.1832 160               | 3.7416 574               | 1.1186 889               | 2.4101 423               | 5.1924 941               | .3364 7224               |
| 1.41         | 1.1874 342               | 3.7549 967               | 1.1213 462               | 2.4158 671               | 5.2048 279               | .3435 8970               |
| 1.42         | 1.1916 375<br>1.1958 261 | 3.7682 887<br>3.7815 341 | 1.1239 909<br>1.1266 232 | 2.4215 649<br>2.4272 360 | 5.2171 034<br>5.2293 215 | .3506 5687<br>.3576 7444 |
| 1.43         | 1.1930 201               | 3.7947 332               | 1.1292 432               | 2.4328 806               | 5.2414 828               | .3646 4311               |
| 1.45         | 1.2041 595               | 3.8078 866               | 1.1318 512               | 2.4384 995               | 5.2535 879               | .3715 6356               |
| 1.46         | 1.2083 046               | 3.8209 946               | 1.1344 472               | 2.4440 924               | 5.2656 374               | .3784 3644               |
| 1.47         | 1.2124 356               | 3.8340 579               | 1.1370 314               | 2.4496 598               | 5.2776 321               | .3852 6240               |
| 1.48         | 1.2165 525<br>1.2206 556 | 3.8470 768<br>3.8600 518 | 1.1396 038<br>1.1421 648 | 2.4552 021<br>2.4607 194 | 5.2895 725<br>5.3014 592 | .3920 4209<br>.3987 7612 |
| 1.50         | 1.2247 449               | 3.8729 833               | 1.1447 142               |                          | 5.3132 928               | .4054 6511               |
|              | = .0000 022              | .0000 071                | .0000 019                | .0000 041                | .0000 089                | .0000 0800               |
| Eili         | F                        | 1                        | <u> </u>                 | L                        | 1                        | 6                        |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N     | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$                         | <del>∛</del> 10N         | <sup>3</sup> √100 N      | log <sub>e</sub> N       |
|-------|--------------------------|--------------------------|---------------------------------------|--------------------------|--------------------------|--------------------------|
| 1.50  | 1.2247 449               | 3.8729 833               | 1.1447 142                            | 2.4662 121               | 5.3132 928               | .4054 6511               |
| 1.51  | 1.2288 206               | 3.8858 718               | 1.1472 524                            | 2.4716 804               | 5.3250 740               | .4121 0965               |
| 1.52  | 1.2328 828               | 3.8987 177               | 1.1497 794                            | 2.4771 247               | 5.3368 033               | .4187 1033               |
| 1.53  | 1.2369 317               | 3.9115 214               | 1.1522 954                            | 2.4825 451               | 5.3484 812               | .4252 6774               |
| 1.54  | 1.2409 674<br>1.2449 900 | 3.9242 834<br>3.9370 039 | 1.1548 004                            | 2.4879 419<br>2.4933 155 | 5.3601 084<br>5.3716 854 | .4317 8242<br>.4382 5493 |
| 1.56  | 1.2449 900               | 3.9496 835               | 1.1572 743                            | 2.4935 155               | 5.3832 126               | .4446 8582               |
| 1.57  | 1.2529 964               | 3.9623 226               | 1.1622 509                            | 2.5039 936               | 5.3946 907               | .4510 7562               |
| 1.58  | 1.2569 805               | 3.9749 214               | 1.1647 133                            | 2.5092 987               | 5.4061 202               | .4574 2485               |
| 1.59  | 1.2609 520               | 3.9874 804               | 1.1671 653                            | 2.5145 815               | 5.4175 015               | 4637 3402                |
| 1.60  | 1.2649 111               | 4.0000 000               | 1.1696 071                            | 2.5198 421               | 5.4288 352               | .4700 0363               |
| 1.61  | 1.2688 578               | 4.0124 805               | 1.1720 387                            | 2.5250 809<br>2.5302 980 | 5.4401 218               | .4762 3418               |
| 1.62  | 1.2727 922               | 4.0249 224<br>4.0373 258 | 1.1744 603                            | 2.5354 937               | 5.4513 618<br>5.4625 556 | .4824 2615<br>.4885 8001 |
| 1.64  | 1.2806 248               | 4.0496 913               | 1.1792 737                            | 2.5406 682               | 5.4737 037               | .4946 9624               |
| 1.65  | 1.2845 233               | 4.0620 192               | 1.1816 658                            | 2.5458 217               | 5.4848 066               | .5007 7529               |
| 1.66  | 1.2884 099               | 4.0743 098               | 1.1840 481                            | 2.5509 544               | 5.4958 647               | .5068 1760               |
| 1.67  | 1.2922 848               | 4.0865 633               | 1.1864 210                            | 2.5560 666               | 5.5068 784               | .5128 2363               |
| 1.68  | 1.2961 481               | 4.0987 803<br>4.1109 610 | 1.1887 844                            | 2.5611 583               | 5.5178 484<br>5.5287 748 | .5187 9379               |
| 1.69  | 1.3000 000<br>1.3038 405 | 4.1109 610               | 1.1911 384<br>1.1934 832              | 2.5662 299<br>2.5712 816 | 5.5396 583               | .5247 2853<br>.5306 2825 |
|       | <del></del>              |                          | · · · · · · · · · · · · · · · · · · · | 2.5763 135               | 5.5504 991               | .5364 9337               |
| 1.71  | 1.3076 697<br>1.3114 877 | 4.1352 146               | 1.1958 188<br>1.1981 453              | 2.5813 258               | 5.5612 978               | .5423 2429               |
| 1.73  | 1.3152 946               | 4.1593 269               | 1.2004 628                            | 2.5863 187               | 5.5720 547               | .5481 2141               |
| 1.74  | 1.3190 906               | 4.1713 307               | 1.2027 714                            | 2.5912 924               | 5.5827 702               | .5538 8511               |
| 1.75  | 1.3228 757               | 4.1833 001               | 1.2050 711                            | 2.5962 471               | 5.5934 447               | .5596 1579               |
| 1.76  | 1.3266 499               | 4.1952 354               | 1.2073 621                            | 2.6011 829               | 5.6040 787               | .5653 1381               |
| 1.77  | 1.3304 135               | 4.2071 368               | 1.2096 445                            | 2.6061 001               | 5.6146 724<br>5.6252 263 | .5709 7955               |
| 1.78  | 1.3341 664<br>1.3379 088 | 4.2190 046<br>4.2308 392 | 1.2119 183                            | 2.6109 988<br>2.6158 792 | 5.6357 408               | .5766 1336<br>.5822 1562 |
| 1.80  | 1.3416 408               | 4.2426 407               | 1.2164 404                            | 2.6207 414               | 5.6462 162               | .5877 8666               |
| 1.81  | 1.3453 624               | 4.2544 095               | 1.2186 889                            | 2.6255 857               | 5.6566 528               | .5933 2685               |
| 1.82  | 1.3490 738               | 4.2661 458               | 1.2209 291                            | 2.6304 121               | 5.6670 511               | .5988 3650               |
| 1.83  | 1.3527 749               | 4.2778 499               | 1.2231 612                            | 2.6352 209               | 5.6774 114               | .6043 1597               |
| 1.84  | 1.3564 660               | 4.2895 221               | 1.2253 851                            | 2.6400 122               | 5.6877 340               | .6097 6557               |
| 1.85  | 1.3601 471<br>1.3638 182 | 4.3011 626<br>4.3127 717 | 1.2276 010                            | 2.6447 862<br>2.6495 431 | 5.6980 192<br>5.7082 675 | .6151 8564<br>.6205 7649 |
| 1.86  | 1.3674 794               | 4.3127 117               | 1.2320 090                            | 2.6542 829               | 5.7184 791               | .6259 3843               |
| 1.87  | 1.3674 794               | 4.3243 497               | 1.2320 090                            | 2.6590 058               | 5.7286 543               | .6312 7178               |
| 1.89  | 1.3747 727               | 4.3474 130               | 1.2363 856                            | 2.6637 120               | 5.7387 935               | .6365 7683               |
| 1.90  | 1.3784 049               | 4.3588 989               | 1.2385 623                            | 2.6684 016               | 5.7488 971               | .6418 5389               |
| 1.91  | 1.3820 275               | 4.3703 547               | 1.2407 314                            | 2.6730 749               | 5.7589 652               | .6471 0324               |
| 1.92  | 1.3856 406               | 4.3817 805               | 1.2428 930<br>1.2450 471              | 2.6777 318<br>2.6823 726 | 5.7689 983<br>5.7789 966 | .6523 2519<br>.6575 2000 |
| 1.93  | 1.3892 444               | 4.3931 765               | 1.2450 471                            | 2.6869 974               | 5.7889 604               | .6626 8797               |
| 1.94  | 1.3928 388<br>1.3964 240 | 4.4045 431<br>4.4158 804 | 1.2471 937                            | 2.6916 063               | 5.7988 900               | .6678 2937               |
| 1.96  | 1.4000 000               | 4.4271 887               | 1.2514 649                            | 2.6961 995               | 5.8087 857               | .6729 4447               |
| 1.97  | 1.4035 669               | 4.4384 682               | 1.2535 897                            | 2.7007 771               | 5.8186 478               | .6780 3354               |
| 1.98  | 1.4071 247               | 4.4497 191               | 1.2557 072                            | 2.7053 392               | 5.8284 767               | .6830 9684               |
| 1.99  | 1.4106 736               | 4.4609 416               | 1.2578 177                            | 2.7098 860               | 5.8382 725               | .6881 3464               |
| 2. 00 | 1.4142 136               | 4.4720 360               | 1.2599 210                            | 2.7144 176               | 5.8480 355               | .6931 4718               |
| Eili  | 0000 014                 | .0000 04                 | .0000 011                             | .0000 024                | .0000 051                | .0000 0408               |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N    | $\sqrt{N}$               | √10 <i>N</i>             | <sup>3</sup> √N          | ₹ <u>10N</u>             | $\sqrt[3]{100 N}$        | log N                    |
|------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.00 | 1.4142 136               | 4.4721 360               | 1.2599 210               | 2.7144 176               | 5.8480 355               | .6931 4718               |
| 2.01 | 1.4177 447               | 4.4833 024               | 1.2620 174               | 2.7189 341               | 5.8577 660               | .6981 3472               |
| 2.02 | 1.4212 670               | 4.4944 410               | 1.2641 069               | 2.7234 357               | 5.8674 643               | .7030 9751               |
| 2.03 | 1.4247 807               | 4.5055 521               | 1.2661 894               | 2.7279 224               | 5.8771 307               | .7080 3579               |
| 2.04 | 1.4282 857               | 4.5166 359               | 1.2682 651               | 2.7323 944               | 5.8867 653               | .7129 4981               |
| 2.05 | 1.4317 821<br>1.4352 700 | 4.5276 926<br>4.5387 223 | 1.2703 341<br>1.2723 963 | 2.7368 518<br>2.7412 948 | 5.8963 685<br>5.9059 406 | .7178 3979<br>.7227 0598 |
| 2.07 | 1.4332 700               | 4.5367 223               | 1.2744 519               | 2.7457 234               | 5.9154 817               | .7275 4861               |
| 2.08 | 1.4422 205               | 4.5607 017               | 1.2765 009               | 2.7501 377               | 5.9249 921               | .7323 6789               |
| 2.09 | 1.4456 832               | 4.5716 518               | 1.2785 433               | 2.7545 380               | 5.9344 721               | .7371 6407               |
| 2.10 | 1.4491 377               | 4.5825 757               | 1.2805 792               | 2.7589 242               | 5.9439 220               | .7419 3734               |
| 2.11 | 1.4525 839               | 4.5934 736               | 1.2826 086               | 2.7632 965               | 5.9533 418               | .7466 8795               |
| 2.12 | 1.4560 220               | 4.6043 458               | 1.2846 317               | 2.7676 550               | 5.9627 320               | .7514 1609               |
| 2.13 | 1.4594 520               | 4.6151 923               | 1.2866 484               | 2.7719 998               | 5.9720 926               | .7561 2198               |
| 2.14 | 1.4628 739               | 4.6260 134               | 1.2886 587               | 2.7763 311               | 5.9814 240               | .7608 0583               |
| 2.15 | 1.4662 878               | 4.6368 092               | 1.2906 629<br>1.2926 608 | 2.7806 489<br>2.7849 533 | 5.9907 264<br>6.0000 000 | .7654 6784<br>.7701 0822 |
| 2.16 | 1.4696 938<br>1.4730 920 | 4.6475 800<br>4.6583 259 | 1.2946 526               | 2.7892 445               | 6.0092 450               | .7747 2717               |
| 2.18 | 1.4764 823               | 4.6690 470               | 1.2946 383               | 2.7935 224               | 6.0184 617               | .7793 2488               |
| 2.19 | 1.4798 649               | 4.6797 436               | 1.2986 179               | 2.7977 874               | 6.0276 502               | .7839 0154               |
| 2.20 | 1.4832 397               | 4.6904 158               | 1.3005 914               | 2.8020 393               | 6.0368 107               | .7884 5736               |
| 2.21 | 1.4866 069               | 4.7010 637               | 1.3025 591               | 2.8062 784               | 6.0459 436               | .7929 9252               |
| 2.22 | 1.4899 664               | 4.7116 876               | 1.3045 208               | 2.8105 048               | 6.0550 489               | .7975 0720               |
| 2.23 | 1.4933 185               | 4.7222 876               | 1.3064 766               | 2.8147 184               | 6.0641 270               | .8020 0159               |
| 2.24 | 1.4966 630               | 4. 7328 638              | 1.3084 265               | 2.8189 195               | 6.0731 779               | .8064 7587               |
| 2.25 | 1.5000 000<br>1.5033 296 | 4.7434 165<br>4.7539 457 | 1.3103 707<br>1.3123 091 | 2.8231 081<br>2.8272 843 | 6.0822 020<br>6.0911 993 | .8109 3022<br>.8153 6481 |
| 2.27 | 1.5066 519               | 4.7644 517               | 1.3142 418               | 2.8314 482               | 6.1001 702               | .8197 7983               |
| 2.28 | 1.5099 669               | 4.7749 346               | 1.3161 689               | 2.8355 999               | 6.1091 147               | .8241 7544               |
| 2.29 | 1.5132 746               | 4.7853 944               | 1.3180 903               | 2.8397 394               | 6.1180 332               | .8285 5182               |
| 2.30 | 1.5165 751               | 4.7958 315               | 1.3200 061               | 2.8438 670               | 6.1269 257               | .8329 0912               |
| 2.31 | 1.5198 684               | 4.8062 459               | 1.3219 164               | 2.8479 826               | 6.1357 924               | .8372 4752               |
| 2.32 | 1.5231 546               | 4.8166 378               | 1.3238 212               | 2.8520 863               | 6.1446 337               | .8415 6719               |
| 2.33 | 1.5264 338               | 4.8270 074               | 1.3257 205               | 2.8561 782               | 6.1534 495               | .8458 6827               |
| 2.34 | 1.5297 059               | 4.8373 546               | 1.3276 144               |                          | 6.1622 401               | .8501 5093               |
| 2.35 | 1.5329 710<br>1.5362 291 | 4.8476 799<br>4.8579 831 | 1.3295 029<br>1.3313 860 | 2.8643 272<br>2.8683 843 | 6.1710 058<br>6.1797 466 | .8544 1533<br>.8586 6152 |
| 2.37 | 1.5394 804               | 4.8682 646               | 1.3332 639               | 2.8724 300               | 6.1884 628               | .8628 8996               |
| 2.38 | 1.5427 249               | 4.8785 244               | 1.3351 364               | 2.8764 643               | 6.1971 544               | .8671 0049               |
| 2.39 | 1.5459 625               | 4.8887 626               | 1.3370 038               | 2.8804 873               | 6.2058 218               | .8712 9337               |
| 2.40 | 1.5491 933               | 4.8989 795               | 1.3388 659               | 2.8844 991               | 6.2144 650               | .8754 6874               |
| 2.41 | 1.5524 175               | 4.9091 751               | 1.3407 229               | 2.8884 998               | 6.2230 843               | .8796 2675               |
| 2.42 | 1.5556 349               | 4.9193 496               | 1.3425 747               | 2.8924 895               | 6.2316 797               | .8837 6754               |
| 2.43 | 1.5588 457               | 4.9295 030               | 1.3444 214               | 2.8964 682               | 6.2402 515               | .8878 9126               |
| 2.44 | 1.5620 499<br>1.5652 476 | 4.9396 356<br>4.9497 475 | 1.3462 631<br>1.3480 997 | 2.9004 359<br>2.9043 928 | 6.2487 998<br>6.2573 247 | .8919 9804<br>.8960 8802 |
| 2.45 | 1.5684 387               | 4.9497 473               | 1.3499 314               | 2.9043 926               | 6.2658 266               | .9001 6135               |
| 2.47 | 1.5716 234               | 4.9699 095               | 1.3517 581               | 2.9122 746               | 6.2743 054               | .9042 1815               |
| 2.48 | 1.5748 016               | 4.9799 598               | 1.3535 799               | 2.9161 995               | 6.2827 613               | .9082 5856               |
| 2.49 | 1.5779 734               | 4.9899 900               | 1.3553 968               | 2.9201 138               | 6.2911 946               | .9122 8271               |
| 2.50 | 1.5811 388               | 5.0000 000               | 1.3572 088               | 2.9240 177               | 6.2996 052               | .9162 9073               |
| FII  | - 0000 009               | .0000 030                | .0000 007                | .0000 016                | .0000 034                | .0000 0247               |
| Eili | _                        |                          | L                        | L                        | <u> </u>                 | 1                        |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | √10N                     | <sup>3</sup> √100 N      | log <sub>e</sub> N         |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 2.50         | 1.5811 388               | 5.0000 000               | 1.3572 088               | 2.9240 177               | 6.2996 052               | .9162 9073                 |
| 2.51         | 1.5842 980               | 5.0099 900               | 1.3590 160               | 2.9279 112               | 6.3079 935               | .9202 8275                 |
| 2.52         | 1.5874 508               | 5.0199 602               | 1.3608 184               | 2.9317 944               | 6.3163 596               | .9242 5890                 |
| 2.53         | 1.5905 974               | 5.0299 105               | 1.3626 161               | 2.9356 673               | 6.3247 035               | .9282 1930                 |
| 2.54         | 1.5937 377               | 5.0398 413               | 1.3644 090               | 2.9395 301               | 6.3330 255               | .9321 6408                 |
| 2.55<br>2.56 | 1.5968 719<br>1.6000 000 | 5.0497 525<br>5.0596 443 | 1.3661 972<br>1.3679 808 | 2.9433 827<br>2.9472 252 | 6.3413 257<br>6.3496 042 | .9360 9336<br>.9400 0726   |
| 2.57         | 1.6031 220               | 5.0695 167               | 1.3697 597               | 2.9510 577               | 6.3578 612               | .9439 0590                 |
| 2.58         | 1.6062 378               | 5.0793 700               | 1.3715 340               | 2.9548 804               | 6.3660 968               | .9477 8940                 |
| 2.59         | 1.6093 477               | 5.0892 043               | 1.3733 037               | 2.9586 931               | 6.3743 111               | .9516 5788                 |
| 2.60         | 1.6124 515               | 5.0990 195               | 1.3750 689               | 2.9624 961               | 6.3825 043               | .9555 1145                 |
| 2.61         | 1.6155 494               | 5.1088 159               | 1.3768 295               | 2.9662 893               | 6.3906 765               | .9593 5022                 |
| 2.62         | 1.6186 414               | 5.1185 936               | 1.3785 857               | 2.9700 728               | 6.3988 279               | .9631 7432                 |
| 2.63         | 1.6217 275               | 5.1283 526               | 1.3803 374               | 2.9738 467               | 6.4069 586               | .9669 8385                 |
| 2.64         | 1.6248 077               | 5.1380 930               | 1.3820 846               | 2.9776 111               | 6.4150 687               | .9707 7892                 |
| 2.65<br>2.66 | 1.6278 821<br>1.6309 506 | 5.1478 151<br>5.1575 188 | 1.3838 275<br>1.3855 660 | 2.9813 660<br>2.9851 114 | 6.4231 583<br>6.4312 276 | .9745 5964<br>.9783 2612   |
| 2.67         | 1.6340 135               | 5.1672 043               | 1.3873 001               | 2.9888 475               | 6.4392 767               | .9820 7847                 |
| 2.68         | 1.6370 706               | 5.1768 716               | 1.3890 299               | 2.9925 742               | 6.4473 057               | .9858 1679                 |
| 2.69         | 1.6401 219               | 5.1865 210               | 1.3907 554               | 2.9962 917               | 6.4553 148               | .9895 4119                 |
| 2.70         | 1.6431 677               | 5.1961 524               | 1.3924 767               | 3.0000 000               | 6.4633 041               | .9932 5177                 |
| 2.71         | 1.6462 078               | 5.2057 660               | 1.3941 936               | 3.0036 991               | 6.4712 736               | .9969 4863                 |
| 2.72         | 1.6492 423               | 5.2153 619               | 1.3959 064               | 3.0073 892               | 6.4792 236               | 1.0006 3188                |
| 2.73         | 1.6522 712               | 5.2249 402               | 1.3976 150               | 3.0110 702               | 6.4871 541               | 1.0043 0161                |
| 2.74         | 1.6552 945               | 5.2345 009               | 1.3993 194               | 3.0147 423               | 6.4950 653               | 1.0079 5792                |
| 2.75<br>2.76 | 1.6583 124<br>1.6613 248 | 5.2440 442<br>5.2535 702 | 1.4010 197<br>1.4027 158 | 3.0184 054<br>3.0220 596 | 6.5029 572<br>6.5108 301 | 1.0116 0091<br>1.0152 3068 |
| 2.77         | 1.6643 317               | 5.2630 789               | 1.4044 079               | 3.0257 050               | 6.5186 839               | 1.0188 4732                |
| 2.78         | 1.6673 332               | 5.2725 705               | 1.4060 959               | 3.0293 417               | 6.5265 189               | 1.0224 5093                |
| 2.79         | 1.6703 293               | 5.2820 451               | 1.4077 798               | 3.0329 697               | 6.5343 351               | 1.0260 4160                |
| 2.80         | 1.6733 201               | 5.2915 026               | 1.4094 597               | 3.0365 890               | 6.5421 326               | 1.0296 1942                |
| 2.81         | 1.6763 055               | 5.3009 433               | 1.4111 357               | 3.0401 997               | 6.5499 116               | 1.0331 8448                |
| 2.82         | 1.6792 856               | 5.3103 672               | 1.4128 076               | 3.0438 018               | 6.5576 722               | 1.0367 3688                |
| 2.83         | 1.6822 604               | 5.3197 744               | 1.4144 757               | 3.0473 954               | 6.5654 144               | 1.0402 7671                |
| 2.84         | 1.6852 300               | 5.3291 650<br>5.3385 391 | 1.4161 398<br>1.4177 999 | 3.0509 806<br>3.0545 574 | 6.5731 385               | 1.0438 0405<br>1.0473 1899 |
| 2.85<br>2.86 | 1.6881 943<br>1.6911 535 | 5.3478 968               | 1.4177 999               | 3.0581 258               | 6.5885 323               | 1.0508 2162                |
| 2.87         | 1.6941 074               | 5.3572 381               | 1.4211 087               | 3.0616 859               | 6.5962 023               | 1.0543 1203                |
| 2.88         | 1.6970 563               | 5.3665 631               | 1.4227 573               | 3.0652 377               | 6.6038 545               | 1.0577 9029                |
| 2.89         | 1.7000 000               | 5.3758 720               | 1.4244 021               | 3.0687 814               | 6.6114 890               | 1.0612 5650                |
| 2.90         | 1.7029 386               | 5.3851 648               | 1.4260 431               | 3.0723 168               | 6.6191 059               | 1.0647 1074                |
| 2.91         | 1.7058 722               | 5.3944 416               | 1.4276 804               | 3.0758 442               | 6.6267 054               | 1.0681 5308                |
| 2.92         | 1.7088 007               | 5.4037 024               | 1.4293 139               | 3.07.93 634              | 6.6342 874               | 1.0715 8362                |
| 2.93         | 1.7117 243               | 5.4129 474               | 1.4309 437               | 3.0828 747               | 6.6418 522               | 1.0750 0242                |
| 2.94         | 1.7146 428<br>1.7175 564 | 5.4221 767<br>5.4313 902 | 1.4325 698<br>1.4341 921 | 3.0863 780<br>3.0898 733 | 6.6493 998<br>6.6569 302 | 1.0784 0958<br>1.0818 0517 |
| 2.95         | 1.7204 651               | 5.4405 882               | 1.4341 921               | 3.0938 607               | 6.6644 437               | 1.0851 8927                |
| 2.97         | 1.7233 688               | 5.4497 706               | 1.4374 260               | 3.0968 403               | 6.6719 403               | 1.0885 6195                |
| 2.98         | 1.7262 677               | 5.4589 376               | 1.4390 374               | 3.1003 121               | 6.6794 200               | 1.0919 2330                |
| 2.99         | 1.7291 616               | 5.4680 892               | 1.4406 453               | 3.1037 762               | 6.6868 831               | 1.0952 7339                |
| 3.00         | 1.7320 508               | 5.4772 256               | 1.4422 496               | 3.1072 325               | 6.6943 295               | 1.0986 1229                |
| Eili<br>Eili | 0000 007                 | .0000 022                | .0000 005                | .0000 011                | .0000 024                | .0000 0165                 |
| Eill         | Ē                        | l                        | L                        | L                        | L                        |                            |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | <sup>3</sup> √N          | ₹ <u>10N</u>             | <sup>3</sup> √100 N      | $\log_{e} N$               |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 3.00         | 1.7320 508               | 5.4772 256               | 1.4422 496               | 3.1072 325               | 6.6943 295               | 1.0986 1229                |
| 3.01         | 1.7349 352               | 5.4863 467               | 1.4438 503               | 3.1106 812               | 6.7017 594               | 1.1019 4008                |
| 3.02         | 1.7378 147               | 5.4954 527               | 1.4454 475               | 3.1141 222               | 6.7091 729               | 1.1052 5683                |
| 3.03         | 1.7406 895               | 5.5045 436               | 1.4470 411               | 3.1175 556               | 6.7165 700               | 1.1085 6262                |
| 3.04         | 1.7435 596<br>1.7464 249 | 5.5136 195<br>5.5226 805 | 1.4486 313<br>1.4502 180 | 3.1209 815<br>3.1243 999 | 6.7239 508<br>6.7313 155 | 1.1118 5752<br>1.1151 4159 |
| 3.06         | 1.7492 856               | 5.5317 267               | 1.4518 012               | 3.1278 108               | 6.7386 641               | 1.1184 1492                |
| 3.07         | 1.7521 415               | 5.5407 581               | 1.4533 809               | 3.1312 143               | 6.7459 967               | 1.1216 7756                |
| 3.08         | 1.7549 929               | 5.5497 748               | 1.4549 573               | 3.1346 104               | 6.7533 134               | 1.1249 2960                |
| 3.09         | 1.7578 396               | 5.5587 768               | 1.4565 302               | 3.1379 992               | 6.7606 143               | 1.1281 7109                |
| 3.10         | 1.7606 817               | 5.5677 644               | 1.4580 997               | 3.1413 807               | 6.7678 995               | 1.1314 0211                |
| 3.11<br>3.12 | 1.7635 192<br>1.7663 522 | 5.5767 374<br>5.5856 960 | 1.4596 659<br>1.4612 287 | 3.1447 549<br>3.1481 218 | 6.7751 690<br>6.7824 229 | 1.1346 2273<br>1.1378 3300 |
| 3.13         | 1.7691 806               | 5.5946 403               | 1.4627 882               | 3.1514 816               | 6.7896 613               | 1.1410 3300                |
| 3.14         | 1.7720 045               | 5.6035 703               | 1.4643 444               | 3.1548 343               | 6.7968 844               | 1.1442 2280                |
| 3.15         | 1.7748 239               | 5.6124 861               | 1.4658 972               | 3.1581 798               | 6.8040 921               | 1.1474 0245                |
| 3.16         | 1.7776 389               | 5.6213 877               | 1.4674 468               | 3.1615 183               | 6.8112 846               | 1.1505 7203                |
| 3.17         | 1.7804 494               | 5.6302 753               | 1.4689 931<br>1.4705 362 | 3.1648 497<br>3.1681 741 | 6.8184 619<br>6.8256 242 | 1.1537 3159<br>1.1568 8120 |
| 3.18         | 1.7832 555<br>1.7860 571 | 5.6391 489<br>5.6480 085 | 1.4720 760               | 3.1714 916               | 6.8327 715               | 1.1600 2092                |
| 3.20         | 1.7888 544               | 5.6568 542               | 1.4736 126               | 3.1748 021               | 6.8399 038               | 1.1631 5081                |
| 3.21         | 1.7916 473               | 5.6656 862               | 1.4751 460               | 3.1781 058               | 6.8470 213               | 1.1662 7094                |
| 3.22         | 1.7944 358               | 5.6745 044               | 1.4766 763               | 3.1814 025               | 6.8541 240               | 1.1693 8136                |
| 3.23         | 1.7972 201               | 5.6833 089               | 1.4782 033               | 3.1846 925               | 6.8612 120               | 1.1724 8214                |
| 3.24         | 1.8000 000               | 5.6920 998               | 1.4797 272               | 3.1879 757               | 6.8682 855               | 1.1755 7333                |
| 3.25<br>3.26 | 1.8027 756<br>1.8055 470 | 5.7008 771<br>5.7096 410 | 1.4812 480<br>1.4827 657 | 3.1912 521<br>3.1945 219 | 6.8753 443<br>6.8823 888 | 1.1786 5500<br>1.1817 2720 |
| 3.27         | 1.8083 141               | 5.7183 914               | 1.4842 803               | 3.1977 849               | 6.8894 188               | 1.1847 8998                |
| 3.28         | 1.8110 770               | 5.7271 284               | 1.4857 918               | 3.2010 413               | 6.8964 345               | 1.1878 4342                |
| 3.29         | 1.8138 357               | 5.7358 522               | 1.4873 002               | 3.2042 911               | 6.9034 359               | 1.1908 8756                |
| 3.30         | 1.8165 902               | 5.7445 626               | 1.4888 056               | 3.2075 343               | 6.9104 232               | 1.1939 2247                |
| 3.31         | 1.8193 405               | 5.7532 599               | 1.4903 079               | 3.2107 710               | 6.9173 964               | 1.1969 4819                |
| 3.32         | 1.8220 867               | 5.7619 441<br>5.7706 152 | 1.4918 072               | 3.2140 012               | 6.9243 556               | 1.1999 6478<br>1.2029 7230 |
| 3.33         | 1.8248 288<br>1.8275 667 | 5.7792 733               | 1.4933 035<br>1.4947 968 | 3.2172 248<br>3.2204 421 | 6.9313 008               | 1.2029 7230                |
| 3.35         | 1.8303 005               | 5.7879 185               | 1.4962 871               | 3.2236 529               | 6.9451 496               | 1.2089 6035                |
| 3.36         | 1.8330 303               | 5.7965 507               | 1.4977 745               | 3.2268 573               | 6.9520 533               | 1.2119 4097                |
| 3.37         | 1.8357 560               | 5.8051 701               | 1.4992 589               | 3.2300 554               | 6.9589 433               | 1.2149 1274                |
| 3.38         | 1.8384 776               | 5.8137 767               | 1.5007 404               | 3. 2332 471              | 6.9658 198               | 1.2178 7571                |
| 3.39<br>3.40 | 1.8411 953<br>1.8439 089 | 5.8223 707<br>5.8309 519 | 1.5022 189<br>1.5036 946 | 3.2364 326<br>3.2396 118 | 6.9726 826<br>6.9795 320 | 1.2208 2992                |
| 3.41         | 1.8466 185               | 5.8395 205               | 1.5051 674               | 3.2427 848               | 6.9863 680               | 1.2237 7543<br>1.2267 1229 |
| 3.42         | 1.8493 242               | 5.8480 766               | 1.5066 373               | 3.2459 516               | 6.9931 907               | 1.2296 4055                |
| 3.43         | 1.8520 259               | 5.8566 202               | 1.5081 043               | 3.2491 122               | 7.0000 000               | 1.2325 6026                |
| 3.44         | 1.8547 237               | 5.8651 513               | 1.5095 685               | 3.2522 667               | 7.0067 961               | 1.2354 7147                |
| 3.45<br>3.46 | 1.8574 176<br>1.8601 075 | 5.8736 701<br>5.8821 765 | 1.5110 298<br>1.5124 883 | 3.2554 150<br>3.2585 573 | 7.0135 791<br>7.0203 490 | 1.2383 7423<br>1.2412 6859 |
| 3.47         | 1.8627 936               | 5.8906 706               | 1.5124 665               | 3.2616 936               | 7.0271 058               | 1.2412 5659                |
| 3.48         | 1.8654 758               | 5.8991 525               | 1.5153 970               | 3.2648 238               | 7.0271 038               | 1.2441 3439                |
| 3.49         | 1.8681 542               | 5.9076 222               | 1.5168 471               | 3.2679 480               | 7.0405 806               | 1.2499 0174                |
| 3.50         | 1.8708 287               | 5.9160 798               | 1.5182 945               | 3.2710 663               | 7.0472 987               | 1.2527 6297                |
| E11          | = .0000 005<br>=         | .0000 017                | .0000 004                | .0000 008                | .0000 018                | .0000 0118                 |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| 3.51 1.8734 994 5.9245 253 1.5197 391 3.2741 786 7.0540 041 1.2556 1604 3.52 1.8761 663 5.9329 588 1.5211 810 3.2772 851 7.0666 967 1.2584 6099 3.53 1.8786 294 5.9413 803 1.5226 201 3.2803 856 7.0673 766 1.2612 9787 3.54 1.8814 888 5.9497 899 1.5240 566 3.2834 803 7.0740 440 1.2641 2673 3.55 1.8841 444 5.9581 876 1.5254 903 3.2865 692 7.0873 411 1.2697 6054 3.57 1.8894 444 5.9749 477 1.5283 497 3.2927 296 7.0873 411 1.2697 6054 3.57 1.8894 444 5.9749 477 1.5283 497 3.2927 296 7.0939 709 1.2725 6567 3.59 1.8947 295 5.9916 609 1.5311 985 3.2986 671 7.1005 885 1.2753 2683 3.59 1.8947 295 5.9916 609 1.5311 985 3.2986 671 7.1071 937 1.2781 5227 3.50 1.9000 000 6.0083 276 1.5340 366 3.3049 818 7.1269 360 3.61 1.9000 000 6.0083 276 1.5340 366 3.3049 818 7.1203 674 1.2837 0777 3.62 1.9026 298 6.0166 436 1.5354 518 3.3080 306 7.1269 360 1.2804 303 3.63 1.9052 599 6.0249 481 1.5368 644 3.3110 739 7.1333 4925 1.2892 3265 3.61 1.9104 973 6.0415 230 1.5396 817 3.3171 437 7.1403 370 1.2919 8368 3.65 1.9104 973 6.0415 230 1.5396 817 3.3171 437 7.1465 695 1.2847 2717 3.66 1.9131 126 6.0497 934 1.5410 865 3.3201 703 7.1530 901 1.2974 6313 3.69 1.9209 373 6.0745 370 1.5424 888 3.33221 914 7.1595 988 1.3001 916 3.369 1.9203 33 6.0745 370 1.5452 857 3.3322 171 7.1725 809 1.3056 264 3.70 1.9235 384 6.0827 625 1.5466 804 3.3322 129 7.1790 634 1.3310 318 33 1.5494 622 3.3382 151 7.1919 663 1.3137 2367 3.73 1.9313 208 6.1073 726 1.5504 903 3.3501 374 7.2175 294 6.138 839 1.5524 900 3.3410 868 7.2244 81 1.3310 318 39 1.5524 900 3.3410 868 7.2244 81 1.3320 6.991 803 1.5494 622 3.3382 151 7.1919 663 1.3137 2367 3.75 1.9364 917 6.1237 244 1.5504 903 3.3500 366 7.7248 631 1.3310 318 39 1.5524 900 3.3410 868 7.2244 51 1.3207 750 3.75 1.9346 917 6.1237 244 1.5504 903 3.3410 868 7.2244 51 1.3207 750 3.75 1.9346 917 6.1237 244 1.5504 903 3.3410 868 7.2240 451 1.3207 970 3.37 1.9416 488 6.1400 326 1.5563 733 3.3410 867 7.2240 451 1.3320 806 3.75 1.9346 917 6.1237 244 1.5504 903 3.3410 905 7.2240 451 1.3320 900 1.3244 1.5549 900 3.3441 904 903 6 | N    | $\sqrt{N}$   | √10 <i>N</i> | <sup>3</sup> √N | ₹ <u>10N</u> | <sup>3</sup> √100 N | log <sub>e</sub> N |
|--|------|--------------|--------------|-----------------|--------------|---------------------|--------------------|
| 3.52 1.8761 663 5.9329 588 1.5211 810 3.2772 851 7.0606 967 1.2584 6095 3.53 1.8788 294 5.9413 803 1.5226 201 3.2803 856 7.0673 766 1.2612 9787 3.55 1.8841 444 5.9581 876 1.5254 903 3.2865 692 7.0806 988 1.2669 4766 3.56 1.8867 962 5.9665 736 1.5269 213 3.2865 692 7.0806 988 1.2669 4766 3.56 1.8867 962 5.9665 736 1.5269 213 3.2865 692 7.0806 988 1.2669 4766 3.56 1.8867 962 5.9665 736 1.5269 213 3.2865 692 7.0803 978 1.2526 976 6054 3.59 1.8920 888 5.9833 101 1.5297 754 3.2958 012 7.1007 937 1.2725 5563 3.59 1.8920 888 5.9833 101 1.5297 754 3.2958 012 7.1007 937 1.2781 5226 3.59 1.8947 295 5.9916 609 1.5311 985 3.2988 671 7.1071 937 1.2781 5226 3.60 1.8973 666 6.0000 000 1.5326 189 3.3019 272 7.1137 866 1.2803 7077 3.62 1.9026 298 6.0166 436 1.5354 518 3.3080 306 7.1269 360 1.2864 7400 3.63 1.9052 599 6.0249 481 1.5386 644 3.3110 739 7.1334 925 1.2892 3265 3.64 1.9078 784 6.0332 413 1.5382 743 3.314 116 7.1400 370 1.2919 8368 3.65 1.9104 973 6.0415 230 1.5396 817 3.311 437 7.1465 695 1.2947 2717 3.66 1.9131 126 6.0643 044 7934 1.5410 856 3.3201 703 7.1530 901 1.2914 6313 3.66 1.9131 126 6.0643 044 7934 1.5410 856 3.3201 703 7.1530 901 1.2914 6313 3.66 1.9183 326 6.0663 004 1.5438 885 3.3262 070 7.1660 957 1.3029 1273 3.69 1.9293 373 6.0745 370 1.5452 857 3.3322 171 7.1725 809 1.3056 244 3.368 1.9183 326 6.0663 004 1.5438 885 3.3262 070 7.1660 957 1.3029 1273 3.71 1.9261 360 6.0990 769 1.5494 622 3.3322 127 7.1790 544 1.3083 3283 3.71 1.9261 360 6.0997 69 1.5494 622 3.3322 127 7.1790 544 1.3083 3283 3.75 1.9287 302 6.0991 803 1.5549 602 3.3341 868 7.2248 321 1.3190 856 3.376 1.9390 719 6.1318 839 1.5549 600 3.3501 374 7.2165 522 1.3110 3181 3.75 1.9946 492 6.1562 976 1.5591 207 3.3590 237 7.2367 972 1.3324 869 3.361 1.9519 221 6.1725 197 1.5618 584 3.3649 127 7.7246 551 1.3310 369 3.361 1.9519 221 6.1725 197 1.5568 543 3.341 686 7.2346 482 6.1866 149 1.5532 237 3.3590 237 7.2367 972 1.3323 660 3.388 1.9570 386 6.1866 994 1.5669 476 1.5594 620 3.3466 423 7.3232 389 1.9748 488 6.2289 993 1.5754 403 3.386 1.9949 937 | 3.50 | 1.8708 287   | 5.9160 798   | 1.5182 945      | 3.2710 663   | 7.0472 987          | 1.2527 6297        |
| 3.53 1.8788 294 5.9413 803 1.5226 201 3.2803 856 7.0673 766 1.2612 9787 3.54 1.8814 848 5.9581 876 1.5254 903 3.2865 692 7.0805 988 1.2669 4760 3.556 1.8867 962 5.9665 736 1.5265 903 3.2865 692 7.0805 988 1.2669 4760 3.556 1.8807 962 5.9665 736 1.5265 903 3.2865 692 7.0805 981 1.2697 6054 3.57 1.8894 444 5.9749 477 1.5283 497 3.2927 296 7.0939 709 1.2725 6566 3.59 1.8947 295 5.9916 609 1.5311 985 3.2988 611 7.1015 885 1.2753 6286 3.59 1.8947 295 5.9916 609 1.5312 985 3.2988 611 7.1071 937 1.2781 5220 3.60 1.8973 666 6.0000 000 1.5326 189 3.3019 272 7.1137 866 1.2809 3383 3.61 1.9000 000 6.0083 276 1.5340 366 3.3049 818 7.1203 674 1.2837 0773 3.62 1.9926 298 6.0166 436 1.5354 518 3.3049 818 7.1203 674 1.2837 0773 3.62 1.9926 298 6.0166 436 1.5354 518 3.3049 818 7.1203 674 1.2837 0773 3.64 1.9078 784 6.0332 413 1.5382 743 3.3141 116 7.1400 370 1.2919 8365 3.65 1.9104 973 6.0415 230 1.5396 817 3.311 437 7.1450 695 1.2947 2717 3.66 1.9131 126 6.0497 934 1.5410 865 3.3201 703 7.1530 901 1.2974 6313 3.66 1.9131 126 6.0643 004 1.5438 885 3.3262 070 7.1550 991 1.2974 6313 3.69 1.9209 373 6.0745 370 1.5432 885 3.3262 070 7.1660 957 1.3029 1273 3.69 1.9209 373 6.0745 370 1.5452 857 3.3292 171 7.1725 809 1.3056 2644 3.371 1.9287 302 6.0991 803 1.5494 622 3.3382 151 7.1919 663 1.3317 236 3.73 1.9387 302 6.0991 803 1.5494 622 3.3382 151 7.1919 663 1.3317 236 3.75 1.9364 917 6.1237 244 1.5536 163 3.3411 868 7.2048 321 1.3310 816 3.75 1.9364 917 6.1237 244 1.5536 163 3.3411 868 7.2048 321 1.3310 883 1.5549 462 3.3322 127 7.1725 809 1.3056 2644 3.372 1.9287 302 6.0991 803 1.5494 622 3.3382 151 7.1919 663 1.3317 236 3.75 1.9364 917 6.1237 244 1.5556 403 3.3414 868 7.2048 321 1.3310 866 3.75 1.9364 917 6.1237 244 1.5536 480 3.3414 868 7.2044 51 1.3207 500 3.375 1.9364 917 6.1237 244 1.5556 496 3.3341 3047 7.2246 451 1.3327 500 3.75 1.9364 917 6.1237 244 1.5568 480 3.3414 868 7.2044 51 1.3327 500 3.375 1.9364 917 6.1237 244 1.5568 480 3.3441 486 7.2244 528 6.1481 705 1.5567 403 3.3414 868 7.2244 51 1.3320 500 3.344 868 7.2244 528 |      |              |              |                 | 3.2741 786   |                     | 1.2556 1604        |
| 3.54   |      |              |              |                 |              |                     | 1.2584 6099        |
| 3.55   | 1 1  |              |              |                 |              |                     | )                  |
| 3.56   |      |              |              |                 | 1            |                     |                    |
| 3. 57  |      |              |              |                 |              |                     |                    |
| 3.59   |      |              |              | ľ               |              | 1                   | 1.2725 6560        |
| 3.60   |      |              | 5.9833 101   | 1.5297 754      |              |                     | 1.2753 6280        |
| 3. 61         1.9000 000         6.0083 276         1.5340 366         3.3049 818         7.1203 674         1.2837 0777           3. 62         1.9026 298         6.0166 436         1.5354 518         3.3080 306         7.1269 360         1.2864 7403           3. 63         1.9078 784         6.0332 413         1.5368 644         3.3110 739         7.1334 925         1.2892 3263           3. 65         1.9104 973         6.0415 230         1.5396 817         3.311 1437         7.1465 695         1.2947 2717           3. 66         1.9131 126         6.0497 934         1.5410 865         3.3201 703         7.1530 901         1.2974 6313           3. 67         1.9187 244         6.0580 525         1.5424 888         3.3231 914         7.1595 988         1.3001 916           3. 68         1.9183 326         6.0663 004         1.5438 885         3.3292 171         7.1725 809         1.3056 264           3. 70         1.9293 384         6.0827 625         1.5466 804         3.3322 171         7.1725 809         1.3056 264           3. 72         1.9287 302         6.0909 769         1.5480 725         3.3382 151         7.1919 644         1.3083 328           3. 72         1.9287 302         6.0997 801         1.5480 725         3.3382 139   | 3.59 | 1.8947 295   | 5.9916 609   | 1.5311 985      | 3.2988 671   | 7.1071 937          | 1.2781 5220        |
| 3.62 1.9026 298 6.0166 436 1.5354 518 3.3080 306 7.1269 360 1.2864 7402 3.63 1.9052 559 6.0249 481 1.5368 644 3.3110 739 7.1334 925 1.2892 3263 3.64 1.9078 784 6.0332 413 1.5382 743 3.3141 116 7.1400 370 1.2919 8368 3.65 1.9104 973 6.0415 230 1.5396 817 3.3171 437 7.1465 695 1.2947 2717 3.66 1.9131 126 6.0497 934 1.5410 865 3.3201 703 7.1530 901 1.2974 6318 3.67 1.9157 244 6.0580 525 1.5424 888 3.3231 914 7.1595 988 1.3001 913 3.66 1.9183 326 6.0663 004 1.5438 885 3.3262 070 7.1660 957 1.3029 1278 3.69 1.9209 373 6.0745 370 1.5452 857 3.3292 171 7.1725 809 1.3056 2644 3.70 1.9285 384 6.0827 625 1.5466 804 3.3322 219 7.1790 544 1.3083 3288 3.71 1.9261 360 6.0909 769 1.5480 725 3.3352 212 7.1855 162 1.3110 313 3.72 1.9287 302 6.0991 803 1.5494 622 3.3382 151 7.1919 663 1.3137 2367 3.73 1.9313 208 6.1073 726 1.5508 493 3.3412 036 7.1984 050 1.3164 0823 3.74 1.9339 080 6.1155 539 1.5522 340 3.3441 868 7.2048 321 1.3190 856 3.75 1.9364 917 6.1237 244 1.5536 163 3.3471 648 7.2112 479 1.3217 558 3.76 1.9390 719 6.1318 839 1.5549 960 3.3501 374 7.2176 522 1.3244 1894 3.77 1.9416 488 6.1400 326 1.5563 733 3.3501 374 7.2240 451 1.3244 1894 3.79 1.9467 922 6.1562 976 1.5591 207 3.3590 237 7.2367 972 1.3323 660 3.80 1.9493 589 6.1644 140 1.5604 908 3.3509 237 7.2367 972 1.3323 660 3.80 1.9493 589 6.1644 140 1.5604 908 3.3509 77 7.2495 045 1.3376 2919 3.82 1.9544 820 6.1866 994 1.5645 865 3.3707 995 7.2495 045 1.3376 2919 3.81 1.9519 221 6.1725 197 1.5618 584 3.3649 219 7.2495 045 1.3376 2919 3.81 1.9570 386 6.1866 994 1.5645 865 3.3707 979 975 7.2684 824 1.3320 600 3.88 1.9697 716 6.2289 646 1.5713 656 610 3.3795 777 7.2810 794 1.3320 600 3.88 1.9697 716 6.2289 646 1.5713 656 3.380 1.9748 418 61 1.3426 5044 3.381 1.9579 386 6.2869 865 1.5727 144 3.3883 105 7.2998 937 1.3584 091 3.99 1.9748 418 6.2449 980 1.5740 609 3.391 114 7.3061 436 1.3360 745 3.391 1.9778 990 749 6.2609 931 1.5764 609 3.391 114 7.3061 436 1.3360 745 3.391 1.9773 720 6.2269 931 1.5764 609 3.391 114 7.3061 436 1.3360 745 3.391 1.9778 899 6.600 0.6269 903 | 3.60 | 1.8973 666   | 6.0000 000   | 1.5326 189      | 3.3019 272   | 7.1137 866          | 1.2809 3385        |
| 3.63         1.9052         559         6.0249         481         1.5368         644         3.3110         739         7.1334         925         1.2892         3265           3.64         1.9078         784         6.0415         230         1.5396         817         3.3141         146         7.1465         695         1.2919         8366           3.66         1.9131         126         6.0497         934         1.5410         865         3.3201         703         7.1530         901         1.2974         6313           3.67         1.9157         244         6.0580         525         1.5424         888         3.3221         703         7.1530         901         1.2926         6313           3.69         1.9283         334         6.0745         370         1.5452         857         3.3292         171         7.1725         809         1.3056         264           3.70         1.9287         302         6.0997         69         1.5480         725         3.3382         212         7.1855         162         1.3110         318           3.72         1.9287         302         6.0991         803         1.5549         622         <   |      |              | ł            |                 | 1            |                     | 1.2837 0777        |
| 3.64       1.9078 784       6.0332 413       1.5382 743       3.3141 116       7.1400 370       1.2919 8368         3.65       1.9104 973       6.0415 230       1.5396 817       3.3171 437       7.1465 695       1.2947 2717         3.66       1.9131 126       6.0497 934       1.5410 865       3.3201 703       7.1530 901       1.2974 6717         3.67       1.9157 244       6.0580 525       1.5424 888       3.3231 914       7.1595 988       1.3001 916         3.69       1.9209 373       6.0745 370       1.5452 857       3.3292 171       7.1725 809       1.3056 264         3.70       1.9235 384       6.0827 625       1.5466 804       3.3322 219       7.1790 544       1.3083 328         3.71       1.9287 302       6.0991 803       1.5494 622       3.3352 212       7.1856 162       1.3110 3137 236         3.74       1.9339 080       6.1073 726       1.5508 493       3.3412 036       7.1984 050       1.3117 316         3.75       1.9364 917       6.1237 244       1.5536 163       3.3471 648       7.2146 459       1.3217 556         3.76       1.9999 719       6.1318 839       1.5549 960       3.3501 374       7.2176 522       1.3244 1894         3.77       1.9416 488       6.1400 326  |      | 1            |              | l .             |              |                     |                    |
| 3.65   |      | ŀ            | l            | 1               | l .          |                     | i                  |
| 3.66       1.9131       126       6.0497       934       1.5410       865       3.3201       703       7.1530       901       1.2974       6315         3.67       1.9157       244       6.0863       004       1.5438       885       3.3231       914       7.1595       988       1.3001       916         3.69       1.9209       373       6.0745       370       1.5462       857       3.3292       171       7.1725       899       1.3056       2644         3.70       1.9235       384       6.0827       625       1.5466       804       3.3322       219       7.1790       544       1.3083       3282         3.71       1.9261       360       6.0909       769       1.5480       725       3.3352       212       7.1855       162       1.3110       3188         3.72       1.9287       302       6.0173       726       1.5508       493       3.3412       036       7.1944       050       1.3113       7336         3.74       1.9390       806       6.1155       539       1.5522       340       3.3411       648       7.2112       479       1.3217       5584         3.75  |      |              |              |                 | 1            |                     | 1.2947 2717        |
| 3.67   |      |              |              | l               |              |                     | 1.2974 6315        |
| 3.69   | 3.67 | 1.9157 244   | 6.0580 525   |                 | 3.3231 914   | 7.1595 988          | 1.3001 9166        |
| 3.70   |      | 1.9183 326   |              |                 |              |                     | 1.3029 1275        |
| 3.71         1.9261         360         6.0909         769         1.5480         725         3.3352         212         7.1855         162         1.3110         3181           3.72         1.9287         302         6.0991         803         1.5494         622         3.382         151         7.1919         663         1.3137         236'           3.73         1.9339         080         6.1155         539         1.5528         403         3.3412         036         7.1984         050         1.3164         082:           3.75         1.9364         917         6.1237         244         1.5536         163         3.3471         648         7.2112         479         1.3217         558           3.76         1.9416         488         6.1400         326         1.5563         733         3.3501         374         7.2216         522         1.3217         7500           3.78         1.9467         922         6.1562         976         1.5591         207         3.3501         747         7.2240         451         1.3270         7500           3.79         1.9467         922         6.1562         976         1.5591         207  |      |              |              | <del></del>     | <del> </del> | <del></del>         |                    |
| 3.72         1.9287 302         6.0991 803         1.5494 622         3.3382 151         7.1919 663         1.3137 236'           3.73         1.9313 208         6.1073 726         1.5508 493         3.3412 036         7.1984 050         1.3164 082'           3.74         1.9339 080         6.1155 539         1.5522 340         3.3441 868         7.2048 321         1.3190 856           3.75         1.9364 917         6.1237 244         1.5536 163         3.3471 648         7.2112 479         1.3217 558           3.76         1.9390 719         6.1318 839         1.5549 960         3.3501 374         7.2176 522         1.3244 1896           3.77         1.9416 488         6.1400 326         1.5563 733         3.3501 047         7.2240 451         1.3270 7506           3.78         1.9442 222         6.1481 705         1.5577 482         3.3560 668         7.2304 268         1.3297 240           3.79         1.9467 922         6.1562 976         1.5591 207         3.3590 237         7.2367 972         1.3323 660           3.81         1.9519 221         6.1725 197         1.5618 584         3.3649 219         7.2495 045         1.3376 2919           3.82         1.9544 820         6.1806 149         1.5632 237         3.3678 633         7.2   |      |              |              |                 | <del></del>  |                     |                    |
| 3.73       1.9313       208       6.1073       726       1.5508       493       3.3412       036       7.1984       050       1.3164       0823         3.74       1.9339       080       6.1155       539       1.5522       340       3.3441       868       7.2048       321       1.3190       8561         3.75       1.9390       719       6.1318       839       1.5549       960       3.3501       374       7.2112       479       1.3217       5584         3.77       1.9416       488       6.1400       326       1.5563       733       3.3510       047       7.2240       51       1.3274       1750         3.78       1.9442       222       6.1481       705       1.5577       482       3.3560       668       7.2304       268       1.3297       2401         3.79       1.9467       922       6.1562       976       1.5591       207       3.3590       237       7.2367       972       1.3323       6010         3.81       1.9519       221       6.1562       976       1.5618       584       3.369       219       7.2495       045       1.3376       2919         3.82   |      |              | 1            |                 |              | 1                   |                    |
| 3.74       1.9339       080       6.1155       539       1.5522       340       3.3441       868       7.2048       321       1.3190       8566         3.75       1.9364       917       6.1237       244       1.5536       163       3.3471       648       7.2112       479       1.3217       558         3.76       1.9390       719       6.1318       839       1.5549       960       3.3501       374       7.2176       522       1.3244       1896         3.77       1.9416       488       6.1400       326       1.5567       482       3.3560       668       7.2304       268       1.3297       240         3.79       1.9467       922       6.1562       976       1.5591       207       3.350       37       7.2367       972       1.3323       660         3.80       1.9493       589       6.1644       140       1.5604       908       3.3619       754       7.2431       564       1.3350       010         3.81       1.9519       221       6.1725       197       1.5684       865       3.3649       219       7.2431       564       1.3350       010         3.82  |      |              |              |                 |              |                     |                    |
| 3.75         1.9364 917         6.1237 244         1.5536 163         3.3471 648         7.2112 479         1.3217 558           3.76         1.9390 719         6.1318 839         1.5549 960         3.3501 374         7.2176 522         1.3244 1896           3.77         1.9416 488         6.1400 326         1.5563 733         3.3551 047         7.2240 451         1.3270 7500           3.78         1.9442 222         6.1481 705         1.5577 482         3.3560 668         7.2304 268         1.3297 240           3.79         1.9467 922         6.1562 976         1.5591 207         3.3590 237         7.2367 972         1.3323 660           3.80         1.9493 589         6.1644 140         1.5604 908         3.3619 754         7.2431 564         1.3350 010           3.81         1.9519 221         6.1725 197         1.5618 584         3.3649 219         7.2495 045         1.3376 2919           3.82         1.9544 820         6.1806 149         1.5659 271         3.3767 863         7.2584 815         1.3402 504           3.84         1.9559 918         6.1967 734         1.5659 471         3.3733 307         7.2684 824         1.3454 723           3.85         1.9624 883         6.2128 898         1.5673 052         3.3766 567         7.274   |      |              |              | 1               |              | i                   |                    |
| 3.77       1.9416       488       6.1400       326       1.5563       733       3.3531       047       7.2240       451       1.3270       7500         3.78       1.9442       222       6.1481       705       1.5577       482       3.3560       668       7.2304       268       1.3297       240         3.79       1.9467       922       6.1562       976       1.5591       207       3.3590       237       7.2367       972       1.3323       6602         3.80       1.9493       589       6.1644       140       1.5604       908       3.3619       754       7.2431       564       1.3350       010         3.81       1.9519       221       6.1725       197       1.5618       584       3.3649       219       7.2495       045       1.3376       2919         3.82       1.9544       820       6.1866       149       1.5632       237       3.3678       633       7.2588       415       1.3402       504         3.83       1.9570       386       6.1866       994       1.5645       865       3.3707       995       7.2621       674       1.3428       6480         3.84  |      | 1.9364 917   |              |                 | 4            |                     | 1.3217 5584        |
| 3.78       1.9442 222       6.1481 705       1.5577 482       3.3560 668       7.2304 268       1.3297 240         3.79       1.9467 922       6.1562 976       1.5591 207       3.3590 237       7.2367 972       1.3323 660         3.80       1.9493 589       6.1644 140       1.5604 908       3.3619 754       7.2431 564       1.3350 010         3.81       1.9519 221       6.1725 197       1.5618 584       3.3649 219       7.2495 045       1.3376 2919         3.82       1.9544 820       6.1806 149       1.5632 237       3.3678 633       7.2558 415       1.3402 504         3.83       1.9570 386       6.1886 994       1.5645 865       3.3707 995       7.2621 674       1.3428 648         3.84       1.9595 918       6.1967 734       1.5659 471       3.3737 307       7.2684 824       1.3454 723         3.85       1.9621 417       6.2048 368       1.5673 052       3.3766 567       7.2747 863       1.3480 731         3.86       1.9646 883       6.2128 898       1.5686 610       3.3795 777       7.2810 794       1.3506 6716         3.87       1.9672 316       6.2299 324       1.5700 145       3.3824 936       7.2873 616       1.3532 545         3.89       1.9723 083       6.2369 865   | 3.76 | 1.9390 719   | 6.1318 839   | 1.5549 960      | 3.3501 374   | 7.2176 522          | 1.3244 1896        |
| 3.79         1.9467         922         6.1562         976         1.5591         207         3.3590         237         7.2367         972         1.3323         6602           3.80         1.9493         589         6.1644         140         1.5604         908         3.3619         754         7.2431         564         1.3350         010*           3.81         1.9519         221         6.1725         197         1.5618         584         3.3649         219         7.2495         045         1.3376         291*           3.82         1.9570         386         6.1866         149         1.5632         237         3.3678         633         7.2584         415         1.3402         504*           3.84         1.9595         918         6.1967         734         1.5659         471         3.3737         307         7.2684         824         1.3454         723*           3.85         1.9621         417         6.2048         368         1.5673         052         3.3766         567         7.2747         863         1.3480         731*           3.87         1.9624         316         6.2209         324         1.5700         145  |      | 1            | 1            |                 | ľ            |                     | 1.3270 7500        |
| 3.80         1.9493         589         6.1644         140         1.5604         908         3.3619         754         7.2431         564         1.3350         010           3.81         1.9519         221         6.1725         197         1.5618         584         3.3649         219         7.2495         045         1.3376         2919           3.82         1.9544         820         6.1806         149         1.5632         237         3.3678         633         7.2558         415         1.3402         5042           3.83         1.9570         386         6.1886         994         1.5645         865         3.3707         995         7.2621         674         1.3428         6480           3.84         1.9595         918         6.1967         734         1.5659         471         3.3737         307         7.2684         824         1.3454         7237           3.85         1.9621         417         6.2048         368         1.5673         052         3.3766         567         7.2747         863         1.3480         731           3.87         1.9672         316         6.2289         464         1.5713         656  |      |              |              |                 |              |                     |                    |
| 3.81       1.9519       221       6.1725       197       1.5618       584       3.3649       219       7.2495       045       1.3376       2919         3.82       1.9544       820       6.1806       149       1.5632       237       3.3678       633       7.2558       415       1.3402       5049         3.83       1.9570       386       6.1866       994       1.5645       865       3.3707       995       7.2621       674       1.3428       6480         3.84       1.9595       918       6.1967       734       1.5659       471       3.3737       307       7.2684       824       1.3454       7237         3.85       1.9621       417       6.2048       368       1.5673       052       3.3766       567       7.2747       863       1.3480       7317         3.86       1.9646       883       6.2128       898       1.5686       610       3.3795       777       7.2810       794       1.3506       6718         3.87       1.9672       316       6.2289       646       1.5713       656       3.3854       046       7.2936       330       1.3558       351         3.89  |      |              | <del> </del> |                 | <del></del>  | <del></del>         | <del> </del>       |
| 3.82       1.9544 820       6.1806 149       1.5632 237       3.3678 633       7.2558 415       1.3402 5043         3.83       1.9570 386       6.1886 994       1.5645 865       3.3707 995       7.2621 674       1.3428 6480         3.84       1.9595 918       6.1967 734       1.5659 471       3.3737 307       7.2684 824       1.3454 7233         3.85       1.9621 417       6.2048 368       1.5673 052       3.3766 567       7.2747 863       1.3480 7313         3.86       1.9646 883       6.2128 898       1.5686 610       3.3795 777       7.2810 794       1.3506 6716         3.87       1.9672 316       6.2209 324       1.5700 145       3.3824 936       7.2873 616       1.3532 545         3.89       1.9723 083       6.2369 865       1.5713 656       3.3854 046       7.2936 330       1.3558 351         3.90       1.9748 418       6.2449 980       1.5740 609       3.3912 114       7.3061 436       1.3609 765         3.91       1.9773 720       6.2529 993       1.5754 051       3.3941 074       7.3123 828       1.3635 373         3.92       1.9798 990       6.2609 903       1.5767 470       3.3969 985       7.3186 114       1.3660 916         3.93       1.9849 433       6.2769 419 <td></td> <td></td> <td><del></del></td> <td><del> </del></td> <td><del></del></td> <td><del> </del></td> <td><del> </del></td>  |      |              | <del></del>  | <del> </del>    | <del></del>  | <del> </del>        | <del> </del>       |
| 3.83       1.9570       386       6.1886       994       1.5645       865       3.3707       995       7.2621       674       1.3428       6486         3.84       1.9595       918       6.1967       734       1.5659       471       3.3737       307       7.2684       824       1.3454       723*         3.85       1.9621       417       6.2048       368       1.5673       052       3.3766       567       7.2747       863       1.3480       731*         3.86       1.9646       883       6.2128       898       1.5686       610       3.3795       777       7.2810       794       1.3506       6718         3.87       1.9672       316       6.2209       324       1.5700       145       3.3824       936       7.2873       616       1.3532       545         3.88       1.9697       716       6.2289       646       1.5713       656       3.3854       046       7.2936       330       1.3558       351         3.89       1.9723       083       6.2369       865       1.5727       144       3.3883       105       7.2998       937       1.3584       091         3.90  | 1    | l .          | 1            |                 | 1            | l .                 | l :                |
| 3.84       1.9595       918       6.1967       734       1.5659       471       3.3737       307       7.2684       824       1.3454       7237         3.85       1.9621       417       6.2048       368       1.5673       052       3.3766       567       7.2747       863       1.3480       7317         3.86       1.9646       883       6.2128       898       1.5686       610       3.3795       777       7.2810       794       1.3506       6716         3.87       1.9672       316       6.2209       324       1.5700       145       3.3824       936       7.2873       616       1.3532       545         3.88       1.9697       716       6.2289       646       1.5713       656       3.3854       046       7.2936       330       1.3558       351         3.89       1.9723       083       6.2369       865       1.5740       609       3.3912       114       7.3061       436       1.3609       765         3.91       1.9773       720       6.2529       993       1.5754       051       3.3941       074       7.3123       828       1.3635       373         3.92       <   |      |              | i            | 1               |              | 1                   |                    |
| 3.85       1.9621       417       6.2048       368       1.5673       052       3.3766       567       7.2747       863       1.3480       7313         3.86       1.9646       883       6.2128       898       1.5686       610       3.3795       777       7.2810       794       1.3506       6718         3.87       1.9672       316       6.2209       324       1.5700       145       3.3824       936       7.2873       616       1.3532       545         3.88       1.9697       716       6.2289       646       1.5713       656       3.3854       046       7.2936       330       1.3558       351         3.89       1.9723       083       6.2369       865       1.5727       144       3.3883       105       7.2998       937       1.3584       0916         3.90       1.9748       418       6.2449       980       1.5740       609       3.3912       114       7.3061       436       1.3609       765         3.91       1.9773       720       6.2529       993       1.5754       051       3.3941       074       7.3123       828       1.3635       373         3.92       <   | l    | ł            | Į.           |                 |              | 1                   | 1.3454 7237        |
| 3.86       1.9646 883       6.2128 898       1.5686 610       3.3795 777       7.2810 794       1.3506 6718         3.87       1.9672 316       6.2209 324       1.5700 145       3.3824 936       7.2873 616       1.3532 545         3.88       1.9697 716       6.2289 646       1.5713 656       3.3854 046       7.2936 330       1.3558 351         3.89       1.9723 083       6.2369 865       1.5727 144       3.3883 105       7.2998 937       1.3584 0916         3.90       1.9748 418       6.2449 980       1.5740 609       3.3912 114       7.3061 436       1.3609 765         3.91       1.9773 720       6.2529 993       1.5754 051       3.3941 074       7.3123 828       1.3635 373         3.92       1.9798 990       6.2609 903       1.5767 470       3.3969 985       7.3186 114       1.3660 916         3.93       1.9824 228       6.2689 712       1.5780 867       3.3998 847       7.3248 294       1.3686 394         3.95       1.9849 433       6.2769 419       1.5794 240       3.4027 659       7.3310 369       1.3711 807         3.96       1.9899 749       6.2928 531       1.5807 591       3.4056 423       7.3434 205       1.3762 440         3.98       1.9949 937       6.3087 241   |      |              |              |                 |              |                     | 1.3480 7315        |
| 3.88       1.9697       716       6.2289       646       1.5713       656       3.3854       046       7.2936       330       1.3558       351         3.89       1.9723       083       6.2369       865       1.5727       144       3.3883       105       7.2998       937       1.3584       0916         3.90       1.9748       418       6.2449       980       1.5740       609       3.3912       114       7.3061       436       1.3609       765         3.91       1.9773       720       6.2529       993       1.5754       051       3.3941       074       7.3123       828       1.3635       373         3.92       1.9798       990       6.2609       903       1.5767       470       3.3969       985       7.3186       114       1.3660       916         3.93       1.9824       228       6.2689       712       1.5780       867       3.3998       847       7.3248       294       1.3686       394         3.95       1.9849       433       6.2769       419       1.5794       240       3.4027       659       7.3310       369       1.3711       807         3.96 <td< td=""><td></td><td></td><td>]</td><td>j</td><td>j .</td><td>1</td><td>1.3506 6718</td></td<>   |      |              | ]            | j               | j .          | 1                   | 1.3506 6718        |
| 3.89         1.9723         083         6.2369         865         1.5727         144         3.3883         105         7.2998         937         1.3584         0916           3.90         1.9748         418         6.2449         980         1.5740         609         3.3912         114         7.3061         436         1.3609         765           3.91         1.9773         720         6.2529         993         1.5754         051         3.3941         074         7.3123         828         1.3635         373'           3.92         1.9798         990         6.2609         903         1.5767         470         3.3969         985         7.3186         114         1.3660         916           3.93         1.9824         228         6.2689         712         1.5780         867         3.3998         847         7.3248         294         1.3686         394           3.94         1.9849         433         6.2769         419         1.5794         240         3.4027         659         7.3310         369         1.3711         807           3.95         1.9874         607         6.2849         025         1.5807         591 <t< td=""><td></td><td></td><td>l .</td><td></td><td></td><td></td><td>1.3532 5451</td></t<>   |      |              | l .          |                 |              |                     | 1.3532 5451        |
| 3.90         1.9748         418         6.2449         980         1.5740         609         3.3912         114         7.3061         436         1.3609         765           3.91         1.9773         720         6.2529         993         1.5754         051         3.3941         074         7.3123         828         1.3635         373'           3.92         1.9798         990         6.2609         903         1.5767         470         3.3969         985         7.3186         114         1.3660         916           3.93         1.9824         228         6.2689         712         1.5780         867         3.3998         847         7.3248         294         1.3686         394           3.94         1.9849         433         6.2769         419         1.5794         240         3.4027         659         7.3310         369         1.3711         807           3.95         1.9874         607         6.2849         025         1.5807         591         3.4056         423         7.3372         339         1.3737         155           3.96         1.9899         749         6.2928         531         1.5820         920 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>  |      |              |              |                 |              |                     |                    |
| 3.91       1.9773       720       6.2529       993       1.5754       051       3.3941       074       7.3123       828       1.3635       373         3.92       1.9798       990       6.2609       903       1.5767       470       3.3969       985       7.3186       114       1.3660       916         3.93       1.9824       228       6.2689       712       1.5780       867       3.3998       847       7.3248       294       1.3686       394         3.94       1.9849       433       6.2769       419       1.5794       240       3.4027       659       7.3310       369       1.3711       807         3.95       1.9874       607       6.2849       025       1.5807       591       3.4056       423       7.3372       339       1.3737       155         3.96       1.9899       749       6.2928       531       1.5820       920       3.4085       138       7.3434       205       1.3762       440         3.97       1.9924       859       6.3007       936       1.5834       226       3.4113       805       7.3495       966       1.3787       660         3.98  |      | <del> </del> | <del></del>  | <del></del>     | <del> </del> | <del> </del>        | <del> </del>       |
| 3.92     1.9798     990     6.2609     903     1.5767     470     3.3969     985     7.3186     114     1.3660     916       3.93     1.9824     228     6.2689     712     1.5780     867     3.3998     847     7.3248     294     1.3686     394       3.94     1.9849     433     6.2769     419     1.5794     240     3.4027     659     7.3310     369     1.3711     807       3.95     1.9874     607     6.2849     025     1.5807     591     3.4056     423     7.3372     339     1.3737     155       3.96     1.9899     749     6.2928     531     1.5820     920     3.4085     138     7.3434     205     1.3762     440       3.97     1.9924     859     6.3007     936     1.5834     226     3.4113     805     7.3495     966     1.3787     660       3.98     1.9949     937     6.3087     241     1.5847     510     3.4142     424     7.3557     624     1.3812     818       3.99     1.9974     984     6.3166     447     1.5860     771     3.4170     996     7.3680     630     1.3862     943 <t< td=""><td></td><td></td><td></td><td><del></del></td><td><del></del></td><td></td><td></td></t<>   |      |              |              | <del></del>     | <del></del>  |                     |                    |
| 3.93     1.9824     228     6.2689     712     1.5780     867     3.3998     847     7.3248     294     1.3686     394       3.94     1.9849     433     6.2769     419     1.5794     240     3.4027     659     7.3310     369     1.3711     807       3.95     1.9874     607     6.2849     025     1.5807     591     3.4056     423     7.3372     339     1.3737     155       3.96     1.9899     749     6.2928     531     1.5820     920     3.4085     138     7.3434     205     1.3762     440       3.97     1.9924     859     6.3007     936     1.5834     226     3.4113     805     7.3495     966     1.3787     660       3.98     1.9949     937     6.3087     241     1.5847     510     3.4142     424     7.3557     624     1.3812     818       3.99     1.9974     984     6.3166     447     1.5860     771     3.4170     996     7.3619     178     1.3837     912       4.00     2.0000     000     6.3245     553     1.5874     011     3.4199     519     7.3680     630     1.3862     943 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.3660 9165</td>   |      |              |              |                 |              |                     | 1.3660 9165        |
| 3.94     1.9849     433     6.2769     419     1.5794     240     3.4027     659     7.3310     369     1.3711     807       3.95     1.9874     607     6.2849     025     1.5807     591     3.4056     423     7.3372     339     1.3737     155       3.96     1.9899     749     6.2928     531     1.5820     920     3.4085     138     7.3434     205     1.3762     440       3.97     1.9924     859     6.3007     936     1.5834     226     3.4113     805     7.3495     966     1.3787     660       3.98     1.9949     937     6.3087     241     1.5847     510     3.4142     424     7.3557     624     1.3812     818       3.99     1.9974     984     6.3166     447     1.5860     771     3.4170     996     7.3619     178     1.3837     912       4.00     2.0000     000     6.3245     553     1.5874     011     3.4199     519     7.3680     630     1.3862     943   |      |              | 1            |                 |              |                     | 1.3686 3943        |
| 3.96     1.9899     749     6.2928     531     1.5820     920     3.4085     138     7.3434     205     1.3762     440       3.97     1.9924     859     6.3007     936     1.5834     226     3.4113     805     7.3495     966     1.3787     660       3.98     1.9949     937     6.3087     241     1.5847     510     3.4142     424     7.3557     624     1.3812     818       3.99     1.9974     984     6.3166     447     1.5860     771     3.4170     996     7.3619     178     1.3837     912       4.00     2.0000     000     6.3245     553     1.5874     011     3.4199     519     7.3680     630     1.3862     943   |      |              |              |                 |              |                     | 1.3711 8072        |
| 3.97     1.9924 859     6.3007 936     1.5834 226     3.4113 805     7.3495 966     1.3787 660       3.98     1.9949 937     6.3087 241     1.5847 510     3.4142 424     7.3557 624     1.3812 818       3.99     1.9974 984     6.3166 447     1.5860 771     3.4170 996     7.3619 178     1.3837 912       4.00     2.0000 000     6.3245 553     1.5874 011     3.4199 519     7.3680 630     1.3862 943  |      |              |              |                 |              |                     | 1.3737 1558        |
| 3.98 1.9949 937 6.3087 241 1.5847 510 3.4142 424 7.3557 624 1.3812 8183   3.99 1.9974 984 6.3166 447 1.5860 771 3.4170 996 7.3619 178 1.3837 912   4.00 2.0000 000 6.3245 553 1.5874 011 3.4199 519 7.3680 630 1.3862 943  |      | ·            |              | 1               | 1            | i .                 | 1                  |
| 3.99 1.9974 984 6.3166 447 1.5860 771 3.4170 996 7.3619 178 1.3837 912 4.00 2.0000 000 6.3245 553 1.5874 011 3.4199 519 7.3680 630 1.3862 943  | 1    | 1            |              |                 |              |                     |                    |
| 4.00 2.0000 000 6.3245 553 1.5874 011 3.4199 519 7.3680 630 1.3862 943   |      |              |              |                 |              |                     | 1.3837 9123        |
|  | 4.00 | 2,0000 000   | <del> </del> |                 | <del></del>  |                     | 1.3862 9436        |
| EI = .0000 004 .0000 014 .0000 003 .0000 007 .0000 014 .0000 008   | E!!  | = .0000 004  |              |                 | <del></del>  |                     | .0000 0089         |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

|       | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | √10N                     | √100 N                   | $\log_e N$                 |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 4.00  | 2.0000 000               | 6.3245 553               | 1.5874 011               | 3.4199 519               | 7.3680 630               | 1.3862 9436                |
| 4.01  | 2.0024 984               | 6.3324 561               | 1.5887 228               | 3.4227 995               | 7.3741 979               | 1.3887 9124                |
|       | 2.0049 938               | 6.3403 470               | 1.5900 423               | 3.4256 423               | 7.3803 227               | 1.3912 8190                |
| 1 }   | 2.0074 860               | 6.3482 281               | 1.5913 597               | 3.4284 805               | 7.3864 373               | 1.3937 6638                |
| 1 1   | 2.0099 751<br>2.0124 612 | 6.3560 994<br>6.3639 610 | 1.5926 748<br>1.5939 879 | 3.4313 139<br>3.4341 427 | 7.3925 418<br>7.3986 362 | 1.3962 4469<br>1.3987 1688 |
|       | 2.0149 442               | 6.3718 129               | 1.5952 987               | 3.4369 669               | 7.4047 206               | 1.4011 8297                |
| 1     | 2.0174 241               | 6.3796 552               | 1.5966 074               | 3.4397 864               | 7.4107 951               | 1.4036 4300                |
| 4.08  | 2.0199 010               | 6.3874 878               | 1.5979 139               | 3.4426 012               | 7.4168 595               | 1.4060 9699                |
|       | 2.0223 748               | 6.3953 108               | 1.5992 184               | 3.4454 115               | 7.4229 141               | 1.4085 4497                |
|       | 2.0248 457               | 6.4031 242               | 1.6005 207               | 3.4482 172               | 7.4289 588               | 1.4109 8697                |
|       | 2.0273 135               | 6.4109 282               | 1.6018 208               | 3.4510 184               | 7.4349 937               | 1.4134 2303                |
|       | 2.0297 783<br>2.0322 401 | 6.4187 226<br>6.4265 076 | 1.6031 189<br>1.6044 149 | 3.4538 150<br>3.4566 071 | 7.4410 189<br>7.4470 342 | 1.4158 5316<br>1.4182 7741 |
|       | 2.0346 990               | 6.4342 832               | 1.6057 088               | 3. 4593 947              | 7. 4530 399              | 1.4206 9579                |
| 4.15  | 2.0371 549               | 6.4420 494               | 1.6070 006               | 3.4621 778               | 7.4590 359               | 1.4231 0833                |
| i i   | 2.0396 078               | 6.4498 062               | 1.6082 903               | 3.4649 564               | 7.4650 223               | 1.4255 1507                |
|       | 2.0420 578               | 6.4575 537               | 1.6095 780               | 3.4677 306               | 7.4709 991               | 1.4279 1604                |
|       | 2.0445 048<br>2.0469 489 | 6.4652 920<br>6.4730 209 | 1.6108 636<br>1.6121 471 | 3.4705 004<br>3.4732 657 | 7.4769 664<br>7.4829 241 | 1.4303 1125<br>1.4327 0073 |
|       | 2.0493 902               | 6.4807 407               | 1.6134 286               | 3.4760 266               | 7.4888 724               | 1.4350 8453                |
|       | 2.0518 285               | 6.4884 513               | 1.6147 081               | 3.4787 832               | 7.4948 112               | 1.4374 6265                |
|       | 2.0542 639               | 6.4961 527               | 1.6159 856               | 3.4815 354               | 7.5007 407               | 1.4398 3513                |
| 1 1   | 2.0566 964               | 6.5038 450               | 1.6172 610               | 3.4842 833               | 7.5066 607               | 1.4422 0199                |
|       | 2.0591 260               | 6.5115 282               | 1.6185 345               | 3.4870 268               | 7.5125 715               | 1.4445 6327                |
|       | 2.0615 528<br>2.0639 767 | 6.5192 024<br>6.5268 675 | 1.6198 059<br>1.6210 753 | 3.4897 660<br>3.4925 010 | 7.5184 730<br>7.5243 652 | 1.4469 1898<br>1.4492 6916 |
| 1 1   | 2.0663 978               | 6.5345 237               | 1.6223 428               | 3.4952 316               | 7.5302 482               | 1.4516 1383                |
|       | 2.0688 161               | 6.5421 709               | 1.6236 083               | 3.4979 580               | 7.5361 220               | 1.4539 5301                |
|       | 2.0712 315               | 6.5498 092               | 1.6248 718               | 3.5006 801               | 7.5419 867               | 1.4562 8673                |
| 4.30  | 2.0736 441               | 6.5574 385               | 1.6261 333               | 3.5033 981               | 7.5478 423               | 1.4586 1502                |
|       | 2.0760 539               | 6.5650 590               | 1.6273 929               | 3.5061 118               | 7.5536 888               | 1.4609 3790                |
| 4.32  | 2.0784 610               | 6.5726 707               | 1.6286 506               | 3.5088 213               | 7.5595 263               | 1.4632 5540                |
| 3 I   | 2.0808 652<br>2.0832 667 | 6.5802 736<br>6.5878 676 | 1.6299 063               | 3.5115 266<br>3.5142 278 | 7.5653 548<br>7.5711 743 | 1.4655 6754                |
|       | 2.0856 654               | 6.5954 530               | 1.6324 119               | 3.5142 278               | 7.5769 849               | 1.4678 7435<br>1.4701 7585 |
| 4.36  | 2.0880 613               | 6.6030 296               | 1.6336 618               | 3.5196 177               | 7.5827 865               | 1.4724 7206                |
|       | 2.0904 545               | 6.6105 976               | 1.6349 099               | 3.5223 065               | 7.5886 793               | 1.4747 6301                |
| 4. 38 | 2.0928 450               | 6.6181 568               | 1.6361 560               | 3.5249 912               | 7.5943 633               | 1.4770 4872                |
|       | 2.0952 327               | 6.6257 075               | 1.6374 002               | 3.5276 718               | 7.6001 385               | 1.4793 2923                |
|       | 2.0976 177               | 6.6332 496               | 1.6386 425               | 3.5303 483               | 7.6059 049               | 1.4816 0454                |
| 4.41  | 2.1000 000<br>2.1023 796 | 6.6407 831<br>6.6483 081 | 1.6398 830<br>1.6411 216 | 3.5330 208<br>3.5356 893 | 7.6116 626<br>7.6174 116 | 1.4838 7469<br>1.4861 3970 |
|       | 2.1023 196               | 6.6558 245               | 1.6423 583               | 3.5383 537               | 7.6231 519               | 1.4883 9958                |
| 4.44  | 2.1071 308               | 6.6633 325               | 1.6435 932               | 3.5410 141               | 7.6288 836               | 1.4906 5438                |
| 4.45  | 2.1095 023               | 6.6708 320               | 1.6448 262               | 3.5436 705               | 7.6346 067               | 1.4929 0410                |
| 4.46  | 2.1118 712               | 6.6783 231               | 1.6460 573               | 3.5463 230               | 7.6403 212               | 1.4951 4877                |
| 4.47  | 2.1142 375<br>2.1166 010 | 6.6858 059<br>6.6932 802 | 1.6472 866<br>1.6485 141 | 3.5489 715<br>3.5516 160 | 7.6460 272               | 1,4973 8841                |
| 4.49  | 2.1189 620               | 6.7007 462               | 1.6497 398               | 3.5542 566               | 7.6517 247<br>7.6574 137 | 1.4996 2305<br>1.5018 5270 |
|       | 2.1213 203               | 6.7082 039               | 1.6509 636               | 3.5568 933               | 7.6630 943               | 1.5040 7740                |
|       | 0000 004                 | .0000 011                | .0000 002                | .0000 005                | .0000 012                | .0000 0069                 |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | <del>3</del> √10 <i>N</i> | <sup>3</sup> √100 N      | $\log_e N$                 |
|--------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|----------------------------|
| 4.50         | 2.1213 203               | 6.7082 039               | 1.6509 636               | 3.5568 933                | 7.6630 943               | 1.5040 7740                |
| 4.51         | 2.1236 761               | 6.7156 534               | 1.6521 857               | 3.5595 261                | 7.6687 665               | 1.5062 9715                |
| 4.52         | 2.1260 292               | 6.7230 945               | 1.6534 059               | 3.5621 550                | 7.6744 303               | 1.5085 1199                |
| 4.53         | 2.1283 797               | 6.7305 275               | 1.6546 243               | 3.5647 800                | 7.6800 857               | 1.5107 2194                |
| 4.54         | 2.1307 276               | 6.7379 522               | 1.6558 409               | 3.5674 012                | 7.6857 328               | 1.5129 2701                |
| 4.55<br>4.56 | 2.1330 729<br>2.1354 157 | 6.7453 688<br>6.7527 772 | 1.6570 558<br>1.6582 689 | 3.5700 185<br>3.5726 320  | 7.6913 717<br>7.6970 023 | 1.5151 2723<br>1.5173 2262 |
| 4.57         | 2.1377 558               | 6.7601 775               | 1.6594 802               | 3.5752 416                | 7.7026 246               | 1.5195 1320                |
| 4.58         | 2.1400 935               | 6.7675 697               | 1.6606 897               | 3. 5778 475               | 7.7082 388               | 1.5216 9900                |
| 4.59         | 2.1424 285               | 6.7749 539               | 1.6618 975               | 3.5804 496                | 7.7138 448               | 1.5238 8002                |
| 4.60         | 2.1447 611               | 6.7823 300               | 1.6631 035               | 3.5830 479                | 7.7194 426               | 1.5260 5630                |
| 4.61         | 2.1470 911<br>2.1494 185 | 6.7896 981               | 1.6643 078               | 3.5856 424                | 7.7250 324               | 1.5282 2786                |
| 4.62         | 2.1494 163               | 6.7970 582<br>6.8044 103 | 1.6655 103<br>1.6667 111 | 3.5882 332<br>3.5908 202  | 7.7306 141<br>7.7361 877 | 1.5303 9471<br>1.5325 5687 |
| 4.64         | 2.1540 659               | 6.8117 545               | 1.6679 102               | 3.5934 036                | 7.7417 533               | 1.5347 1437                |
| 4.65         | 2.1563 859               | 6.8190 908               | 1.6691 075               | 3.5959 832                | 7.7473 109               | 1.5368 6722                |
| 4.66         | 2.1587 033               | 6.8264 193               | 1.6703 032               | 3.5985 591                | 7.7528 605               | 1.5390 1545                |
| 4.67         | 2.1610 183               | 6.8337 398               | 1.6714 971               | 3.6011 313                | 7.7584 023               | 1.5411 5907                |
| 4.68         | 2.1633 308<br>2.1656 408 | 6.8410 526<br>6.8483 575 | 1.6726 893<br>1.6738 798 | 3.6036 999<br>3.6062 648  | 7.7639 361               | 1.5432 9811                |
| 4.70         | 2.1679 483               | 6.8556 546               |                          |                           | 7.7694 620               | 1.5454 3258                |
| 4.71         | 2.1702 534               | 6.8629 440               | 1.6750 687               | 3.6088 261                | 7.7749 801               | 1.5475 6251                |
| 4.72         | 2.1702 554               | 6.8702 256               | 1.6762 558<br>1.6774 413 | 3.6113 837<br>3.6139 377  | 7.7804 904<br>7.7859 928 | 1.5496 8791<br>1.5518 0880 |
| 4.73         | 2.1748 563               | 6.8774 995               | 1.6786 251               | 3.6164 882                | 7.7914 875               | 1.5539 2520                |
| 4.74         | 2.1771 541               | 6.8847 658               | 1.6798 072               | 3.6190 350                | 7.7969 745               | 1.5560 3714                |
| 4.75         | 2.1794 495               | 6.8920 244               | 1.6809 877               | 3.6215 782                | 7.8024 538               | 1.5581 4462                |
| 4.76         | 2.1817 424               | 6.8992 753               | 1.6821 665               | 3.6241 179                | 7.8079 253               | 1.5602 4767                |
| 4.77         | 2.1840 330               | 6.9065 187               | 1.6833 437               | 3.6266 540                | 7.8133 892               | 1.5623 4630                |
| 4.78         | 2.1863 211<br>2.1886 069 | 6.9137 544<br>6.9209 826 | 1.6845 192<br>1.6856 931 | 3.6291 866<br>3.6317 157  | 7.8188 455<br>7.8242 942 | 1.5644 4055<br>1.5665 3041 |
|              |                          |                          |                          |                           |                          |                            |
| 4.80         | 2.1908 902               | 6.9282 032               | 1.6868 653               | 3.6342 412                | 7.8297 353               | 1.5686 1592                |
| 4.81         | 2.1931 712<br>2.1954 498 | 6.9354 164<br>6.9426 220 | 1.6880 360<br>1.6892 050 | 3.6367 632<br>3.6392 817  | 7.8351 688<br>7.8405 948 | 1.5706 9708<br>1.5727 7393 |
| 4.83         | 2.1977 261               | 6.9498 201               | 1.6903 723               | 3.6417 968                | 7.8460 134               | 1.5748 4647                |
| 4.84         | 2.2000 000               | 6.9570 109               | 1.6915 381               | 3.6443 084                | 7.8514 244               | 1.5769 1472                |
| 4.85         | 2.2022 716               | 6.9641 941               | 1.6927 023               | 3.6468 165                | 7.8568 280               | 1.5789 7870                |
| 4.86         | 2.2045 408               | 6.9713 700               | 1.6938 649               | 3.6493 212                | 7.8622 242               | 1.5810 3844                |
| 4.87         | 2.2068 076               | 6.9785 385               | 1.6950 258               | 3.6518 224                | 7.8676 130               | 1.5830 9394                |
| 4.88<br>4.89 | 2.2090 722<br>2.2113 344 | 6.9856 997<br>6.9928 535 | 1.6961 852<br>1.6973 430 | 3.6543 203<br>3.6568 147  | 7.8729 944<br>7.8783 684 | 1.5851 4522<br>1.5871 9230 |
| 4.09         | 2.2113 344               | 7.0000 000               | 1.6984 993               | 3.6593 057                | 7.8837 352               | 1.5871 9230                |
| 4.91         | 2.2133 944 2.2158 520    | 7.0071 392               | 1.6996 539               | 3.6617 933                | 7.8890 946               | 1.5912 7394                |
| 4.91         | 2.2136 320               | 7.0142 712               | 1.7008 070               | 3.6642 776                | 7.8944 468               | 1.5933 0853                |
| 4.93         | 2.2203 603               | 7.0213 959               | 1.7019 585               | 3.6667 585                | 7.8997 917               | 1.5953 3899                |
| 4.94         | 2.2226 111               | 7.0285 134               | 1.7031 085               | 3.6692 360                | 7.9051 294               | 1.5973 6533                |
| 4.95         | 2.2248 595               | 7.0356 236               | 1.7042 569               | 3.6717 102                | 7.9104 599               | 1.5993 8758                |
| 4.96         | 2.2271 057               | 7.0427 267               | 1.7054 038               | 3.6741 811                | 7.9157 832               | 1.6014 0574                |
| 4.97         | 2.2293 497               | 7.0498 227<br>7.0569 115 | 1.7065 491<br>1.7076 929 | 3.6766 487<br>3.6791 129  | 7.9210 994<br>7.9264 084 | 1.6034 1984<br>1.6054 2989 |
| 4.98<br>4.99 | 2.2315 914<br>2.2338 308 | 7.0639 932               | 1.7088 352               | 3.6815 738                | 7.9317 104               | 1.6034 2969                |
| 5.00         | 2.2360 680               | 7.0710 678               | 1.7099 759               | 3.6840 315                | 7.9370 053               | 1.6094 3791                |
| Ell<br>Ell   |                          | .0000 010                | .0000 002                | .0000 004                 | .0000 010                | .0000 0055                 |
| Eill         | F                        |                          | l                        | L                         | L                        | J                          |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | √10N                     | <sup>3</sup> √100 N      | log N                      |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 5.00         | 2.2360 680               | 7.0710 678               | 1.7099 759               | 3.6840 315               | 7.9370 053               | 1.6094 3791                |
| 5.01         | 2.2383 029               | 7.0781 353               | 1.7111 152               | 3.6864 859               | 7.9422 931               | 1.6114 3592                |
| 5.02         | 2.2405 357               | 7.0851 958               | 1.7122 529               | 3.6889 370               | 7.9475 739               | 1.6134 2993                |
| 5.03         | 2.2427 661               | 7.0922 493               | 1.7133 891               | 3.6913 849               | 7.9528 476               | 1.6154 1998                |
| 5.04<br>5.05 | 2.2449 944<br>2.2472 205 | 7.0992 957<br>7.1063 352 | 1.7145 238<br>1.7156 570 | 3.6938 295<br>3.6962 709 | 7.9581 144<br>7.9633 742 | 1.6174 0608<br>1.6193 8824 |
| 5.06         | 2.2494 444               | 7.1133 677               | 1.7167 887               | 3.6987 091               | 7.9686 271               | 1.6213 6648                |
| 5.07         | 2.2516 660               | 7.1203 932               | 1.7179 189               | 3.7011 440               | 7.9738 731               | 1.6233 4082                |
| 5.08         | 2.2538 855               | 7.1274 119               | 1.7190 476               | 3.7035 758               | 7.9791 122               | 1.6253 1126                |
| 5.09         | 2.2561 028               | 7.1344 236               | 1.7201 749               | 3.7060 044               | 7.9843 444               | 1.6272 7783                |
| 5.10         | 2.2583 180               | 7.1414 284               | 1.7213 006               | 3.7084 298               | 7.9895 697               | 1.6292 4054                |
| 5.11         | 2.2605 309               | 7.1484 264               | 1.7224 249               | 3.7108 520               | 7.9947 883               | 1.6311 9940                |
| 5.12<br>5.13 | 2.2627 417<br>2.2649 503 | 7.1554 175<br>7.1624 018 | 1.7235 478<br>1.7246 691 | 3.7132 711<br>3.7156 870 | 8.0000 000<br>8.0052 049 | 1.6331 5444<br>1.6351 0566 |
| 5.14         | 2.2671 568               | 7.1693 793               | 1.7257 890               | 3.7180 998               | 8.0104 031               | 1.6370 5308                |
| 5. 15        | 2.2693 611               | 7.1763 500               | 1.7269 075               | 3.7205 094               | 8.0155 946               | 1.6389 9671                |
| 5.16         | 2.2715 633               | 7.1833 140               | 1.7280 245               | 3.7229 160               | 8.0207 793               | 1.6409 3658                |
| 5.17         | 2.2737 634               | 7.1902 712               | 1.7291 401               | 3.7253 194               | 8.0259 574               | 1.6428 7269                |
| 5.18<br>5.19 | 2.2759 613<br>2.2781 571 | 7.1972 217<br>7.2041 655 | 1.7302 542<br>1.7313 669 | 3.7277 197<br>3.7301 170 | 8.0311 287<br>8.0362 934 | 1.6448 0506<br>1.6467 3370 |
| 5.20         | 2.2803 509               | 7.2111 026               | 1.7324 782               | 3.7301 110               | 8.0414 515               | 1.6486 5863                |
| 5.21         | 2.2825 424               | 7.2111 020               | 1.7335 881               | 3.7349 023               | 8.0466 030               | 1.6505 7986                |
| 5.22         | 2. 2847 319              | 7.2249 567               | 1.7346 965               | 3.7372 903               | 8.0517 479               | 1.6524 9740                |
| 5.23         | 2.2869 193               | 7.2318 739               | 1.7358 035               | 3.7396 753               | 8.0568 862               | 1.6544 1128                |
| 5.24         | 2.2891 046               | 7.2387 844               | 1.7369 091               | 3.7420 573               | 8.0620 180               | 1.6563 2150                |
| 5.25<br>5.26 | 2.2912 878<br>2.2934 690 | 7.2456 884               | 1.7380 133<br>1.7391 161 | 3.7444 362               | 8.0671 432<br>8.0722 620 | 1.6582 2808                |
| 5.27         |                          | }                        |                          | 3.7468 121               | 1                        | 1.6601 3103                |
| 5.28         | 2.2956 481<br>2.2978 251 | 7.2594 766 7.2663 608    | 1.7402 175<br>1.7413 175 | 3.7491 850<br>3.7515 549 | 8.0773 742<br>8.0824 800 | 1.6620 3036<br>1.6639 2610 |
| 5.29         | 2.3000 000               | 7.2732 386               | 1.7424 162               | 3.7539 218               | 8.0875 794               | 1.6658 1825                |
| 5.30         | 2.3021 729               | 7.2801 099               | 1.7435 134               | 3.7562 858               | 8.0926 723               | 1.6677 0682                |
| 5.31         | 2.3043 437               | 7.2869 747               | 1.7446 093               | 3.7586 467               | 8.0977 589               | 1.6695 9184                |
| 5.32         | 2.3065 125               | 7.2938 330               | 1.7457 037               | 3.7610 047               | 8.1028 390               | 1.6714 7330                |
| 5.33         | 2.3086 793               | 7.3006 849               | 1.7467 969               | 3.7633 598               | 8. 1079 128              | 1.6733 5124                |
| 5.34<br>5.35 | 2.3108 440<br>2.3130 067 | 7.3075 304<br>7.3143 694 | 1.7478 886<br>1.7489 790 | 3.7657 119<br>3.7680 610 | 8.1129 803<br>8.1180 414 | 1.6752 2565<br>1.6770 9656 |
| 5.36         | 2.3151 674               | 7.3212 021               | 1.7500 680               | 3.7704 073               | 8.1230 962               | 1.6789 6398                |
| 5.37         | 2.3173 260               | 7.3280 284               | 1.7511 557               | 3.7727 506               | 8.1281 447               | 1.6808 2791                |
| 5.38         | 2.3194 827               | 7.3348 483               | 1.7522 420               | 3.7750 910               | 8.1331 870               | 1.6826 8837                |
| 5.39         | 2.3216 374               | 7.3416 619               | 1.7533 270               | 3.7774 285               | 8.1382 230               | 1.6845 4538                |
| 5.40         | 2.3237 900               | 7.3484 692               | 1.7544 106               | 3.7797 631               | 8.1432 528               | 1.6863 9895                |
| 5.41<br>5.42 | 2.3259 407<br>2.3280 893 | 7.3552 702<br>7.3620 649 | 1.7554 929<br>1.7565 739 | 3.7820 949<br>3.7844 238 | 8.1482 764<br>8.1532 939 | 1.6882 4909<br>1.6900 9581 |
| 5.43         | 2.3302 360               | 7.3688 534               | 1.7576 536               | 3.7867 498               | 8.1583 051               | 1.6919 3913                |
| 5.44         | 2.3323 808               | 7.3756 356               | 1.7587 319               | 3.7890 729               | 8.1633 102               | 1.6937 7906                |
| 5.45         | 2.3345 235               | 7.3824 115               | 1.7598 089               | 3.7913 933               | 8.1683 092               | 1.6956 1561                |
| 5.46         | 2.3366 643               | 7.3891 813               | 1.7608 845               | 3.7937 107               | 8.1733 020               | 1.6974 4879                |
| 5.47         | 2.3388 031               | 7.3959 448               | 1.7619 589               | 3.7960 254               | 8.1782 888               | 1.6992 7862                |
| 5.48<br>5.49 | 2.3409 400<br>2.3430 749 | 7.4027 022<br>7.4094 534 | 1.7630 320<br>1.7641 037 | 3.7983 372<br>3.8006 462 | 8.1832 695<br>8.1882 441 | 1.7011 0510<br>1.7029 2826 |
| 5.50         | 2.3452 079               | 7.4161 985               | 1.7651 742               | 3.8029 525               | 8.1932 127               | 1.7047 4809                |
|              | = .0000 003              | .0000 008                | .0000 002                | .0000 004                | .0000 008                | .0000 0045                 |
| Eili         | F                        |                          | <u> </u>                 | l                        | <u> </u>                 |                            |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | ∛10N                     | <sup>3</sup> √100 N      | log <sub>e</sub> N         |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 5.50         | 2.3452 079               | 7.4161 985               | 1.7651 742               | 3.8029 525               | 8.1932 127               | 1.7047 4809                |
| 5.51         | 2.3473 389               | 7.4229 374               | 1.7662 433               | 3.8052 559               | 8.1981 753               | 1.7065 6462                |
| 5.52         | 2.3494 680               | 7.4296 702               | 1.7673 112               | 3.8075 565               | 8.2031 319               | 1.7083 7786                |
| 5.53         | 2.3515 952               | 7.4363 970               | 1.7683 778               | 3.8098 544               | 8.2080 825               | 1.7101 8782                |
| 5.54<br>5.55 | 2.3537 205<br>2.3558 438 | 7.4431 176<br>7.4498 322 | 1.7694 430<br>1.7705 071 | 3.8121 495<br>3.8144 418 | 8.2130 271<br>8.2179 657 | 1.7119 9450<br>1.7137 9793 |
| 5.56         | 2.3579 652               | 7.4565 408               | 1.7715 698               | 3.8167 314               | 8.2228 985               | 1.7155 9811                |
| 5.57         | 2.3600 847               | 7.4632 433               | 1.7726 312               | 3.8190 182               | 8.2278 254               | 1.7173 9505                |
| 5.58         | 2.3622 024               | 7.4699 398               | 1.7736 914               | 3.8213 023               | 8.2327 463               | 1.7191 8878                |
| 5.59         | 2.3643 181               | 7.4766 303               | 1.7747 503               | 3.8235 837               | 8.2376 614               | 1.7209 7929                |
| 5.60         | 2.3664 319               | 7.4833 148               | 1.7758 080               | 3.8258 624               | 8.2425 706               | 1.7227 6660                |
| 5.61         | 2.3685 439<br>2.3706 539 | 7.4899 933<br>7.4966 659 | 1.7768 644<br>1.7779 195 | 3.8281 383               | 8.2474 740<br>8.2523 715 | 1.7245 5072<br>1.7263 3166 |
| 5.62         | 2.3727 621               | 7.5033 326               | 1.7789 734               | 3.8304 116<br>3.8326 821 | 8.2572 633               | 1.7281 0944                |
| 5.64         | 2.3748 684               | 7.5099 933               | 1.7800 261               | 3.8349 500               | 8.2621 492               | 1.7298 8407                |
| 5.65         | 2.3769 729               | 7.5166 482               | 1.7810 775               | 3.8372 151               | 8.2670 294               | 1.7316 5555                |
| 5.66         | 2.3790 755               | 7.5232 971               | 1.7821 277               | 3.8394 776               | 8.2719 038               | 1.7334 2389                |
| 5.67         | 2.3811 762               | 7.5299 402               | 1.7831 766               | 3.8417 375               | 8.2767 725               | 1.7351 8912                |
| 5.68         | 2.3832 751<br>2.3853 721 | 7.5365 775<br>7.5432 089 | 1.7842 243<br>1.7852 707 | 3.8439 947<br>3.8462 492 | 8.2816 355<br>8.2864 928 | 1.7369 5123<br>1.7387 1025 |
| 5.70         | 2.3874 673               | 7.5498 344               | 1.7863 160               | 3.8485 011               | 8.2913 443               | 1.7404 6617                |
| 5.71         | 2.3895 606               | 7.5564 542               | 1.7873 600               | 3.8507 504               | 8.2961 902               | 1.7422 1902                |
| 5.72         | 2.3916 521               | 7.5630 682               | 1.7884 028               | 3.8529 970               | 8.3010 305               | 1.7439 6881                |
| 5.73         | 2.3937 418               | 7.5696 763               | 1.7894 444               | 3.8552 411               | 8.3058 651               | 1.7457 1553                |
| 5.74         | 2.3958 297               | 7.5762 788               | 1.7904 848               | 3.8574 825               | 8.3106 941               | 1.7474 5921                |
| 5.75         | 2.3979 158               | 7.5828 754               | 1.7915 239               | 3.8597 213               | 8.3155 175               | 1.7491 9985                |
| 5.76         | 2.4000 000<br>2.4020 824 | 7.5894 664<br>7.5960 516 | 1.7925 619<br>1.7935 987 | 3.8619 575<br>3.8641 912 | 8.3203 353<br>8.3251 475 | 1.7509 3747<br>1.7526 7208 |
| 5.77         | 2.4020 624               | 7.6026 311               | 1.7946 342               | 3.8664 222               | 8.3299 542               | 1.7544 0368                |
| 5.79         | 2.4062 419               | 7.6092 050               | 1.7956 686               | 3.8686 507               | 8.3347 553               | 1.7561 3229                |
| 5.80         | 2.4083 189               | 7.6157 731               | 1.7967 018               | 3.8708 766               | 8.3395 509               | 1.7578 5792                |
| 5.81         | 2.4103 942               | 7.6223 356               | 1.7977 338               | 3.8731 000               | 8.3443 410               | 1.7595 8057                |
| 5.82         | 2.4124 676               | 7.6288 924               | 1.7987 646               | 3.8753 208               | 8.3491 256               | 1.7613 0026                |
| 5.83         | 2.4145 393               | 7.6354 437               | 1.7997 942               | 3.8775 391               | 8.3539 047               | 1.7630 1700                |
| 5.84<br>5.85 | 2.4166 092<br>2.4186 773 | 7.6419 893<br>7.6485 293 | 1.8008 227<br>1.8018 499 | 3.8797 548<br>3.8819 680 | 8.3586 784<br>8.3634 466 | 1.7647 3080<br>1.7664 4166 |
| 5.86         | 2.4207 437               | 7.6550 637               | 1.8028 761               | 3.8841 787               | 8.3682 094               | 1.7681 4960                |
| 5.87         | 2.4228 083               | 7.6615 925               | 1.8039 010               | 3.8863 869               | 8.3729 668               | 1.7698 5463                |
| 5.88         | 2.4248 711               | 7.6681 158               | 1.8049 248               | 3.8885 926               | 8.3777 187               | 1.7715 5676                |
| 5.89         | 2.4269 322               | 7.6746 335               | 1.8059 474               | 3.8907 957               | 8.3824 653               | 1.7732 5600                |
| 5.90         | 2.4289 916               | 7.6811 457               | 1.8069 689               | 3.8929 964               | 8.3872 065               | 1.7749 5235                |
| 5.91         | 2.4310 492               | 7.6876 524<br>7.6941 536 | 1.8079 892<br>1.8090 083 | 3.8951 946<br>3.8973 903 | 8.3919 424<br>8.3966 729 | 1.7766 4583<br>1.7783 3645 |
| 5.92<br>5.93 | 2.4331 050<br>2.4351 591 | 7.7006 493               | 1.8100 264               | 3.8973 903               | 8.3966 729               | 1.7800 2421                |
| 5.94         | 2.4372 115               | 7.7071 395               | 1.8110 432               | 3.9017 743               | 8.4061 180               | 1.7817 0913                |
| 5.95         | 2.4392 622               | 7.7136 243               | 1.8120 589               | 3.9039 627               | 8.4108 326               | 1.7833 9122                |
| 5.96         | 2. 4413 111              | 7.7201 036               | 1.8130 735               | 3.9061 485               | 8.4155 419               | 1.7850 7048                |
| 5.97         | 2. 4433 583              | 7.7265 775               | 1.8140 870               | 3.9083 319               | 8.4202 459               | 1.7867 4693                |
| 5.98<br>5.99 | 2.4454 039<br>2.4474 477 | 7.7330 460<br>7.7395 090 | 1.8150 993<br>1.8161 105 | 3.9105 129<br>3.9126 915 | 8.4249 447<br>8.4296 383 | 1.7884 2057<br>1.7900 9141 |
| 6.00         | 2.4494 897               | 7.7459 667               | 1.8171 206               | 3.9148 676               | 8.4343 267               | 1.7917 5947                |
|              | = .0000 002              | .0000 007                | .0000 001                | .0000 003                | .0000 007                | .0000 0038                 |
| Eill         | <u> </u>                 |                          | <u> </u>                 | L                        | L                        |                            |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | <sup>3</sup> √N          | ∛10N                     | ∛ 100 N                    | log <sub>e</sub> N         |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|----------------------------|
| 6.00         | 2.4494 897               | 7.7459 667               | 1.8171 206               | 3.9148 676               | 8.4343 267                 | 1.7917 5947                |
| 6.01         | 2,4515 301               | 7.7524 190               | 1.8181 295               | 3.9170 414               | 8.4390 098                 | 1.7934 2475                |
| 6.02         | 2.4535 688               | 7.7588 659               | 1.8191 374               | 3.9192 127               | 8.4436 877                 | 1.7950 8726                |
| 6.03         | 2.4556 058               | 7.7653 075               | 1.8201 441               | 3.9213 816               | 8.4483 605                 | 1.7967 4701                |
| 6.04         | 2.4576 411<br>2.4596 748 | 7.7717 437<br>7.7781 746 | 1.8211 497<br>1.8221 542 | 3.9235 481<br>3.9257 122 | 8.4530 281<br>8.4576 906   | 1.7984 0401<br>1.8000 5827 |
| 6.06         | 2.4617 067               | 7.7846 002               | 1.8231 576               | 3.9278 739               | 8.4623 479                 | 1.8017 0980                |
| 6.07         | 2.4637 370               | 7.7910 205               | 1.8241 599               | 3.9300 333               | 8.4670 001                 | 1.8033 5861                |
| 6.08         | 2.4657 656               | 7.7974 355               | 1.8251 611               | 3.9321 903               | 8.4716 472                 | 1.8050 0470                |
| 6.09         | 2.4677 925               | 7.8038 452               | 1.8261 611               | 3.9343 449               | 8.4762 892                 | 1.8066 4808                |
| 6.10         | 2.4698 178               | 7.8102 497               | 1.8271 601               | 3.9364 972               | 8.4809 261                 | 1.8082 8877                |
| 6.11         | 2.4718 414<br>2.4738 634 | 7.8166 489<br>7.8230 429 | 1.8281 580<br>1.8291 549 | 3.9386 471<br>3.9407 947 | 8.4855 579<br>8.4901 847   | 1.8099 2677<br>1.8115 6210 |
| 6.13         | 2.4758 837               | 7.8294 317               | 1.8301 506               | 3.9429 399               | 8.4948 065                 | 1.8131 9475                |
| 6.14         | 2.4779 023               | 7.8358 152               | 1.8311 452               | 3.9450 828               | 8.4994 233                 | 1.8148 2474                |
| 6.15         | 2.4799 194               | 7.8421 936               | 1.8321 388               | 3.9472 234               | 8.5040 350                 | 1.8164 5208                |
| 6.16         | 2.4819 347               | 7.8485 667               | 1.8331 313               | 3.9493 616               | 8.5086 417                 | 1.8180 7678                |
| 6.17         | 2.4839 485<br>2.4859 606 | 7.8549 348 7.8612 976    | 1.8341 227<br>1.8351 131 | 3.9514 976<br>3.9536 313 | 8. 5132 435<br>8. 5178 403 | 1.8196 9884<br>1.8213 1827 |
| 6.19         | 2.4879 711               | 7.8676 553               | 1.8361 023               | 3.9557 626               | 8.5224 321                 | 1.8229 3509                |
| 6.20         | 2.4899 799               | 7.8740 079               | 1.8370 906               | 3.9578 916               | 8.5270 190                 | 1.8245 4929                |
| 6.21         | 2.4919 872               | 7.8803 553               | 1.8380 777               | 3.9600 184               | 8.5316 009                 | 1.8261 6090                |
| 6.22         | 2.4929 902               | 7.8835 271               | 1.8390 638               | 3.9621 428               | 8.5361 780                 | 1.8277 6991                |
| 6.23         | 2.4959 968               | 7.8930 349               | 1.8400 488               | 3.9642 650               | 8.5407 501                 | 1.8293 7633                |
| 6.24         | 2.4979 992<br>2.5000 000 | 7.8993 671<br>7.9056 942 | 1.8410 328<br>1.8420 157 | 3.9663 850<br>3.9685 026 | 8.5453 174<br>8.5498 797   | 1.8309 8018<br>1.8325 8146 |
| 6.26         | 2.5019 992               | 7.9120 162               | 1.8429 976               | 3.9706 180               | 8.5544 372                 | 1.8341 8019                |
| 6.27         | 2.5039 968               | 7.9183 332               | 1.8439 785               | 3.972/ 312               | 8.5589 899                 | 1.8357 7635                |
| 6.28         | 2.5059 928               | 7.9246 451               | 1.8449 583               | 3.9748 421               | 8.5635 377                 | 1.8373 6998                |
| 6.29         | 2.5079 872               | 7.9309 520               | 1.8459 370               | 3.9769 508               | 8.5680 807                 | 1.8389 6107                |
| 6.30         | 2.5099 801               | 7.9372 539               | 1.8469 148               | 3.9790 572               | 8.5726 189                 | 1.8405 4963                |
| 6.31         | 2.5119 713               | 7.9435 508               | 1.8478 914               | 3.9811 614<br>3.9832 634 | 8.5771 523<br>8.5816 809   | 1.8421 3568                |
| 6.32         | 2.5139 610<br>2.5159 491 | 7.9498 428<br>7.9561 297 | 1.8488 671<br>1.8498 417 | 3.9853 632               | 8.5862 047                 | 1.8437 1921<br>1.8453 0024 |
| 6.34         | 2.5179 357               | 7.9624 117               | 1.8508 153               | 3.9874 607               | 8.5907 237                 | 1.8468 7877                |
| 6.35         | 2.5199 206               | 7.9686 887               | 1.8517 879               | 3.9895 561               | 8.5952 380                 | 1.8484 5481                |
| 6.36         | 2.5219 040               | 7.9749 608               | 1.8527 595               | 3.9916 492               | 8.5997 476                 | 1.8500 2838                |
| 6.37         | 2.5238 859<br>2.5258 662 | 7.9812 280<br>7.9874 902 | 1.8537 300<br>1.8546 995 | 3.9937 402<br>3.9958 290 | 8.6042 524<br>8.6087 526   | 1.8515 9947<br>1.8531 6810 |
| 6.39         | 2.5278 449               | 7.9937 476               | 1.8556 680               | 3.9979 156               | 8.6132 480                 | 1.8547 3427                |
| 6.40         | 2.5298 221               | 8.0000 000               | 1.8566 355               | 4.0000 000               | 8.6177 388                 | 1.8562 9799                |
| 6.41         | 2.5317 978               | 8.0062 476               | 1.8576 020               | 4.0020 822               | 8.6222 248                 | 1.8578 5927                |
| 6.42         | 2.5337 719               | 8.0124 902               | 1.8585 675               | 4.0041 623               | 8.6267 062                 | 1.8594 1812                |
| 6.43         | 2.5357 445               | 8.0187 281               | 1.8595 320               | 4.0062 403               | 8.6311 830                 | 1.8609 7454                |
| 6.44         | 2.5377 155               | 8.0249 611               | 1.8604 955               | 4.0083 160               | 8.6356 551                 | 1.8625 2854                |
| 6.45         | 2.5396 850<br>2.5416 530 | 8.0311 892<br>8.0374 125 | 1.8614 580<br>1.8624 195 | 4.0103 897<br>4.0124 611 | 8.6401 226<br>8.6445 855   | 1.8640 8013<br>1.8656 2932 |
| 6.47         | 2.5436 195               | 8.0436 310               | 1.8633 800               | 4.0145 305               | 8.6490 437                 | 1.8671 7611                |
| 6.48         | 2.5455 844               | 8.0498 447               | 1.8643 395               | 4.0165 977               | 8.6534 974                 | 1.8687 2051                |
| 6.49         | 2.5475 478               | 8.0560 536               | 1.8652 980               | 4.0186 628               | 8.6579 465                 | 1.8702 6253                |
| 6.50         | 2.5495 098               | 8.0622 577               | 1.8662 556               | 4.0207 258               | 8.6623 911                 | 1.8718 0218                |
| Eilt<br>Eilt | -0000 002                | .0000 006                | .0000 001                | .0000 003                | .0000 006                  | .0000 0032                 |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| 6.51         2.5514         702         8.0684         571         1.8672         121         4.0227         866         8.6668         310         1.8         6.52         2.5534         291         8.0746         517         1.8681         677         4.0248         454         8.6712         665         1.8         6.53         2.5553         865         8.0808         415         1.8691         223         4.0269         020         8.6756         974         1.8         6.55         2.5573         424         8.0870         266         1.8700         760         4.0289         565         8.6801         237         1.8         6.55         2.5592         968         8.0932         070         1.8710         286         4.0310         090         8.6845         456         1.8         6.55         2.5632         011         8.1055         537         1.8719         803         4.0330         594         8.6889         630         1.8         6.52         2.5670         995         8.1178         815         1.8729         311         4.0310         908         8.6933         759         1.8         6.59         2.5670         995         8.1178         815         1.8757         775   | 718 0218 733 3946 748 7438 764 0694 779 3717 794 6505 809 9060 825 1383 840 3475 855 5335 870 6965 885 8365 900 9537 916 0480 931 1196 946 1685 961 1948 976 1986  |
|---|--|
| 6.52         2.5534         291         8.0746         517         1.8681         677         4.0248         454         8.6712         665         1.8           6.53         2.5553         865         8.0808         415         1.8691         223         4.0269         020         8.6756         974         1.8           6.54         2.5573         424         8.0870         266         1.8700         760         4.0289         565         8.6801         237         1.8           6.55         2.5592         968         8.0932         070         1.8710         286         4.0310         090         8.6845         456         1.8           6.56         2.5612         497         8.0993         827         1.8719         803         4.0330         594         8.6889         630         1.8           6.57         2.5632         011         8.1055         537         1.8729         311         4.0351         076         8.6933         759         1.8           6.59         2.5670         95         8.1178         815         1.8748         296         4.0391         980         8.7021         882         1.8           6.60   | 748 7438<br>764 0694<br>779 3717<br>794 6505<br>809 9060<br>825 1383<br>840 3475<br>855 5335<br>870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799 |
| 6.53         2.5553         865         8.0808         415         1.8691         223         4.0269         020         8.6756         974         1.8         6.54         2.5573         424         8.0870         266         1.8700         760         4.0289         565         8.6801         237         1.8         6.55         2.5592         968         8.0932         070         1.8710         286         4.0310         090         8.6845         456         1.8         6.56         2.5612         497         8.0993         827         1.8719         803         4.0330         594         8.6889         630         1.8         6.57         2.5632         011         8.1055         537         1.8729         311         4.0351         076         8.6933         759         1.8         6.58         2.5651         511         8.1117         199         1.8738         808         4.0371         538         8.6977         843         1.8         6.59         2.5670         995         8.1178         815         1.8748         296         4.0391         980         8.7021         82         1.8           6.61         2.5709         920         8.1301         906         1.8767  | 764 0694<br>779 3717<br>794 6505<br>809 9060<br>825 1383<br>840 3475<br>855 5335<br>870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>946 1948<br>976 1986<br>991 1799             |
| 6.54         2.5573         424         8.0870         266         1.8700         760         4.0289         565         8.6801         237         1.8           6.55         2.5592         968         8.0932         070         1.8710         286         4.0310         090         8.6845         456         1.8           6.56         2.5612         497         8.0993         827         1.8719         803         4.0330         594         8.6889         630         1.8           6.57         2.5632         011         8.1055         537         1.8729         311         4.0351         076         8.6933         759         1.8           6.58         2.5651         511         8.1117         199         1.8738         808         4.0371         538         8.6977         843         1.8           6.59         2.5670         995         8.1178         815         1.8748         296         4.0391         980         8.7021         882         1.8           6.61         2.5709         920         8.1301         906         1.8767         243         4.0412         400         8.7655         877         1.8           6.62  | 779 3717<br>794 6505<br>809 9060<br>825 1383<br>840 3475<br>855 5335<br>870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799                         |
| 6.55         2.5592         968         8.0932         070         1.8710         286         4.0310         090         8.6845         456         1.8           6.56         2.5612         497         8.0993         827         1.8719         803         4.0330         594         8.6889         630         1.8           6.57         2.5632         011         8.1055         537         1.8729         311         4.0351         076         8.6933         759         1.8           6.58         2.5651         511         8.1117         199         1.8738         808         4.0371         538         8.6977         843         1.8           6.59         2.5670         995         8.1178         815         1.8748         296         4.0391         980         8.7021         882         1.8           6.60         2.5690         465         8.1240         384         1.8757         775         4.0412         400         8.7065         877         1.8           6.61         2.5709         361         8.1363         382         1.8767         243         4.0432         800         8.7197         596         1.8           6.62  | 794 6505<br>809 9060<br>825 1383<br>840 3475<br>855 5335<br>870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799                                     |
| 6.56         2.5612 497         8.0993 827         1.8719 803         4.0330 594         8.6889 630         1.8           6.57         2.5632 011         8.1055 537         1.8729 311         4.0351 076         8.6933 759         1.8           6.58         2.5651 511         8.1117 199         1.8738 808         4.0371 538         8.6977 843         1.8           6.59         2.5670 995         8.1178 815         1.8748 296         4.0391 980         8.7021 882         1.8           6.60         2.5690 465         8.1240 384         1.8757 775         4.0412 400         8.7065 877         1.8           6.61         2.5709 920         8.1301 906         1.8767 243         4.0432 800         8.7109 827         1.8           6.62         2.5729 361         8.1363 382         1.8776 703         4.0453 180         8.7153 734         1.8           6.63         2.5748 786         8.1424 812         1.8786 152         4.0473 539         8.7197 596         1.8           6.64         2.5768 197         8.1486 195         1.8795 593         4.0493 877         8.7241 413         1.8           6.65         2.5806 976         8.1608 823         1.8814 445         4.0534 493         8.7322 604         1.8           6.6   | 809 9060<br>825 1383<br>840 3475<br>855 5335<br>870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.57         2.5632 011         8.1055 537         1.8729 311         4.0351 076         8.6933 759         1.8           6.58         2.5651 511         8.1117 199         1.8738 808         4.0371 538         8.6977 843         1.8           6.59         2.5670 995         8.1178 815         1.8748 296         4.0391 980         8.7021 882         1.8           6.60         2.5690 465         8.1240 384         1.8757 775         4.0412 400         8.7065 877         1.8           6.61         2.5709 920         8.1301 906         1.8767 243         4.0432 800         8.7109 827         1.8           6.62         2.5729 361         8.1363 382         1.8776 703         4.0453 180         8.7153 734         1.8           6.63         2.5748 786         8.1424 812         1.8786 152         4.0473 539         8.7197 596         1.8           6.64         2.5768 197         8.1486 195         1.8795 593         4.0493 877         8.7241 413         1.8           6.65         2.5806 976         8.1608 823         1.8814 445         4.0514 195         8.7328 187         1.8           6.67         2.5826 343         8.1670 068         1.8823 857         4.0554 770         8.7372 604         1.8           6.7   | 8 25 1383<br>8 40 3475<br>8 55 5335<br>8 70 6965<br>8 8 5 8365<br>9 00 9537<br>9 16 0480<br>9 31 1196<br>9 46 1685<br>9 61 19 48<br>9 76 19 86<br>9 91 1799  |
| 6.58         2.5651         511         8.1117         199         1.8738         808         4.0371         538         8.6977         843         1.8         6.59         2.5670         995         8.1178         815         1.8748         296         4.0391         980         8.7021         882         1.8           6.60         2.5690         465         8.1240         384         1.8757         775         4.0412         400         8.7065         877         1.8           6.61         2.5709         301         8.1363         382         1.8767         243         4.0432         800         8.7109         827         1.8           6.62         2.5729         361         8.1363         382         1.8776         703         4.0453         180         8.7153         734         1.8           6.63         2.5748         786         8.1424         812         1.8786         152         4.0473         539         8.7197         596         1.8           6.64         2.5768         197         8.1486         195         1.8795         593         4.0493         877         8.7241         413         1.8           6.65         2.5806   | 840 3475<br>855 5335<br>870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.60         2.5690         465         8.1240         384         1.8757         775         4.0412         400         8.7065         877         1.8           6.61         2.5709         920         8.1301         906         1.8767         243         4.0432         800         8.7109         827         1.8           6.62         2.5729         361         8.1363         382         1.8776         703         4.0453         180         8.7153         734         1.8           6.63         2.5748         786         8.1424         812         1.8786         152         4.0473         539         8.7197         596         1.8           6.64         2.5768         197         8.1486         195         1.8795         593         4.0493         877         8.7241         413         1.8           6.65         2.5787         594         8.1547         532         1.8805         024         4.0514         195         8.7285         187         1.8           6.66         2.5826         343         8.1670         068         1.8823         857         4.0554         770         8.7372         604         1.8           6.67  | 870 6965<br>885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.61         2.5709         920         8.1301         906         1.8767         243         4.0432         800         8.7109         827         1.8           6.62         2.5729         361         8.1363         382         1.8776         703         4.0453         180         8.7153         734         1.8           6.63         2.5748         786         8.1424         812         1.8786         152         4.0473         539         8.7197         596         1.8           6.64         2.5768         197         8.1486         195         1.8795         593         4.0493         877         8.7241         413         1.8           6.65         2.5787         594         8.1547         532         1.8805         024         4.0514         195         8.7285         187         1.8           6.66         2.5806         976         8.1608         823         1.8814         445         4.0534         493         8.7328         917         1.8           6.67         2.5826         343         8.1670         068         1.8823         857         4.0554         770         8.7372         604         1.8           6.69  | 885 8365<br>900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.62       2.5729       361       8.1363       382       1.8776       703       4.0453       180       8.7153       734       1.8         6.63       2.5748       786       8.1424       812       1.8786       152       4.0473       539       8.7197       596       1.8         6.64       2.5768       197       8.1486       195       1.8795       593       4.0493       877       8.7241       413       1.8         6.65       2.5787       594       8.1547       532       1.8805       024       4.0514       195       8.7285       187       1.8         6.66       2.5806       976       8.1608       823       1.8814       445       4.0534       493       8.7328       917       1.8         6.67       2.5826       343       8.1670       068       1.8823       857       4.0554       770       8.7372       604       1.8         6.69       2.5845       696       8.1731       267       1.8833       259       4.0575       027       8.7416       246       1.8         6.70       2.5884       358       8.1853       528       1.8852       036       4.0615       481  | 900 9537<br>916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.63         2.5748         786         8.1424         812         1.8786         152         4.0473         539         8.7197         596         1.88           6.64         2.5768         197         8.1486         195         1.8795         593         4.0493         877         8.7241         413         1.88           6.65         2.5787         594         8.1547         532         1.8805         024         4.0514         195         8.7285         187         1.88           6.66         2.5806         976         8.1608         823         1.8814         445         4.0534         493         8.7328         917         1.88           6.67         2.5826         343         8.1670         068         1.8823         857         4.0554         470         8.7372         604         1.88           6.69         2.5845         696         8.1731         267         1.8833         259         4.0575         027         8.7416         246         1.88           6.70         2.5884         358         8.1853         528         1.8852         036         4.0615         481         8.7503         401         1.9           6.71 <td>916 0480<br/>931 1196<br/>946 1685<br/>961 1948<br/>976 1986<br/>991 1799</td>   | 916 0480<br>931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.64         2.5768         197         8.1486         195         1.8795         593         4.0493         877         8.7241         413         1.86         6.65         2.5787         594         8.1547         532         1.8805         024         4.0514         195         8.7285         187         1.86         6.66         2.5806         976         8.1608         823         1.8814         445         4.0534         493         8.7328         917         1.88         6.67         2.5826         343         8.1670         068         1.8823         857         4.0554         470         8.7372         604         1.88         6.68         2.5845         696         8.1731         267         1.8833         259         4.0575         027         8.7416         246         1.88         6.69         2.5865         034         8.1792         420         1.8842         653         4.0575         027         8.7416         246         1.88         6.70         2.5884         358         8.1853         528         1.8852         036         4.0615         481         8.7503         401         1.9           6.70         2.5984         358         8.1914         590         1.8861 <td>931 1196<br/>946 1685<br/>961 1948<br/>976 1986<br/>991 1799</td> | 931 1196<br>946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.65         2.5787         594         8.1547         532         1.8805         024         4.0514         195         8.7285         187         1.88           6.66         2.5806         976         8.1608         823         1.8814         445         4.0534         493         8.7328         917         1.8           6.67         2.5826         343         8.1670         068         1.8823         857         4.0554         770         8.7372         604         1.8           6.68         2.5845         696         8.1731         267         1.8842         653         4.0575         027         8.7416         246         1.8           6.69         2.5865         034         8.1792         420         1.8842         653         4.0575         027         8.7416         246         1.8           6.70         2.5884         358         8.1853         528         1.8852         036         4.0615         481         8.7503         401         1.9           6.71         2.5903         668         8.1914         590         1.8861         411         4.0635         678         8.7546         914         1.9           6.72   | 946 1685<br>961 1948<br>976 1986<br>991 1799   |
| 6.66       2.5806       976       8.1608       823       1.8814       445       4.0534       493       8.7328       917       1.88         6.67       2.5826       343       8.1670       068       1.8823       857       4.0554       770       8.7372       604       1.8         6.68       2.5845       696       8.1731       267       1.8833       259       4.0575       027       8.7416       246       1.8         6.69       2.5865       034       8.1792       420       1.8842       653       4.0575       027       8.7416       246       1.8         6.70       2.5884       358       8.1853       528       1.8852       036       4.0615       481       8.7503       401       1.9         6.71       2.5903       668       8.1914       590       1.8861       411       4.0635       678       8.7546       914       1.9         6.72       2.5922       963       8.1975       606       1.8870       776       4.0655       854       8.7590       383       1.9         6.73       2.5942       244       8.2036       577       1.8880       132       4.0676       011   | 961 1948<br>976 1986<br>991 1799   |
| 6.67         2.5826         343         8.1670         068         1.8823         857         4.0554         770         8.7372         604         1.866.68         2.5845         696         8.1731         267         1.8833         259         4.0575         027         8.7416         246         1.866.69         2.5865         034         8.1792         420         1.8842         653         4.0575         027         8.7459         846         1.986.70         2.5884         358         8.1853         528         1.8852         036         4.0615         481         8.7503         401         1.986.71         1.8861         411         4.0635         678         8.7546         914         1.996.72         2.5922         963         8.1975         606         1.8870         776         4.0655         854         8.7590         383         1.986.73         2.5942         244         8.2036         577         1.8880         132         4.0676         011         8.7633         809         1.996.73         1.996         4.0716         264         8.7720         532         1.996         4.0716         264         8.7720         532         1.996         1.996         4.0736         361         8.7763  | 976 1986<br>991 1799   |
| 6.69         2.5865         034         8.1792         420         1.8842         653         4.0595         264         8.7459         846         1.9           6.70         2.5884         358         8.1853         528         1.8852         036         4.0615         481         8.7503         401         1.9           6.71         2.5903         668         8.1914         590         1.8861         411         4.0635         678         8.7546         914         1.9           6.72         2.5922         963         8.1975         606         1.8870         776         4.0655         854         8.7590         383         1.9           6.73         2.5942         244         8.2036         577         1.8880         132         4.0676         011         8.7633         809         1.9           6.74         2.5961         510         8.2097         503         1.8889         478         4.0696         148         8.7677         192         1.9           6.75         2.5980         762         8.2158         384         1.8998         816         4.0716         264         8.7720         532         1.9           6.76  |  |
| 6.70         2.5884         358         8.1853         528         1.8852         036         4.0615         481         8.7503         401         1.9           6.71         2.5903         668         8.1914         590         1.8861         411         4.0635         678         8.7546         914         1.9           6.72         2.5922         963         8.1975         606         1.8870         776         4.0655         854         8.7590         383         1.9           6.73         2.5942         244         8.2036         577         1.8880         132         4.0676         011         8.7633         809         1.9           6.74         2.5961         510         8.2097         503         1.8889         478         4.0696         148         8.7677         192         1.9           6.75         2.5980         762         8.2158         384         1.8898         816         4.0716         264         8.7720         532         1.9           6.76         2.6000         000         8.2219         219         1.8908         144         4.0736         361         8.7763         830         1.9           6.77  |  |
| 6.71         2.5903         668         8.1914         590         1.8861         411         4.0635         678         8.7546         914         1.9           6.72         2.5922         963         8.1975         606         1.8870         776         4.0655         854         8.7590         383         1.9           6.73         2.5942         244         8.2036         577         1.8880         132         4.0676         011         8.7633         809         1.9           6.74         2.5961         510         8.2097         503         1.8889         478         4.0696         148         8.7677         192         1.9           6.75         2.5980         762         8.2158         384         1.8898         816         4.0716         264         8.7720         532         1.9           6.76         2.6000         000         8.2219         219         1.8908         144         4.0736         361         8.7763         830         1.9           6.77         2.6019         224         8.2280         010         1.8917         463         4.0756         438         8.7807         084         1.9           6.78  | 006 1387   |
| 6.72       2.5922       963       8.1975       606       1.8870       776       4.0655       8.54       8.7590       383       1.96         6.73       2.5942       244       8.2036       577       1.8880       132       4.0676       011       8.7633       809       1.9         6.74       2.5961       510       8.2097       503       1.8889       478       4.0696       148       8.7677       192       1.9         6.75       2.5980       762       8.2158       384       1.8898       816       4.0716       264       8.7720       532       1.9         6.76       2.6000       000       8.2219       219       1.8908       144       4.0736       361       8.7763       830       1.9         6.77       2.6019       224       8.2280       010       1.8917       463       4.0756       438       8.7807       084       1.9         6.78       2.6038       433       8.2340       755       1.8926       773       4.0776       496       8.7850       296       1.9   | 021 0753   |
| 6.73       2.5942       244       8.2036       577       1.8880       132       4.0676       011       8.7633       809       1.9         6.74       2.5961       510       8.2097       503       1.8889       478       4.0696       148       8.7677       192       1.9         6.75       2.5980       762       8.2158       384       1.8898       816       4.0716       264       8.7720       532       1.9         6.76       2.6000       000       8.2219       219       1.8908       144       4.0736       361       8.7763       830       1.9         6.77       2.6019       224       8.2280       010       1.8917       463       4.0756       438       8.7807       084       1.9         6.78       2.6038       433       8.2340       755       1.8926       773       4.0776       496       8.7850       296       1.9   | 035 9895<br>050 8815   |
| 6.74       2.5961       510       8.2097       503       1.8889       478       4.0696       148       8.7677       192       1.9         6.75       2.5980       762       8.2158       384       1.8898       816       4.0716       264       8.7720       532       1.9         6.76       2.6000       000       8.2219       219       1.8908       144       4.0736       361       8.7763       830       1.9         6.77       2.6019       224       8.2280       010       1.8917       463       4.0756       438       8.7807       084       1.9         6.78       2.6038       433       8.2340       755       1.8926       773       4.0776       496       8.7850       296       1.9   | 065 7514   |
| 6.75     2.5980 762     8.2158 384     1.8898 816     4.0716 264     8.7720 532     1.9       6.76     2.6000 000     8.2219 219     1.8908 144     4.0736 361     8.7763 830     1.9       6.77     2.6019 224     8.2280 010     1.8917 463     4.0756 438     8.7807 084     1.9       6.78     2.6038 433     8.2340 755     1.8926 773     4.0776 496     8.7850 296     1.9   | 080 5992   |
| 6.77   2.6019 224   8.2280 010   1.8917 463   4.0756 438   8.7807 084   1.9<br>6.78   2.6038 433   8.2340 755   1.8926 773   4.0776 496   8.7850 296   1.9  | 095 4250   |
| 6.78   2.6038 433   8.2340 755   1.8926 773   4.0776 496   8.7850 296   1.9   | 110 2289   |
|   | 125 0109   |
|   | 139 7710<br>154 5094   |
|   |  |
|   | 169 2261   |
|   | 183 9212<br>198 5947   |
|   | 213 2467   |
|   | 227 8773   |
| 1 1 1 1   | 242 4865   |
|   | 257 0744   |
|   | 271 6411<br>286 1865   |
|   | 300 7109   |
|   | 315 2141   |
|   | 329 6964   |
| 6.92   2.6305 893   8.3186 537   1.9056 159   4.1055 250   8.8450 854   1.9   | 344 1577   |
|   | 358 5981   |
| C 05 0 6360 053 0 2366 660 1 0002 657 4 1114 402 0 0570 400 116   | 373 0177   |
|   | 387 4166<br>3401 7947  |
|   |  |
|   | 1/1/6 15.7.7   |
|   | 9416 1522<br>9430 4892   |
| 7.00 2.6457 513 8.3666 003 1.9129 312 4.1212 853 8.8790 400 1.9   | 9416 1522<br>9430 4892<br>9444 8056  |
| EII = .0000 002 .0000 006 .0000 001 .0000 002 .0000 005 .0  | 430 4892   |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | 3√N                      | ₹ <u>10N</u>             | <sup>3</sup> √100 N      | log N                      |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 7.00         | 2.6457 513               | 8.3666 003               | 1.9129 312               | 4.1212 853               | 8.8790 400               | 1.9459 1015                |
| 7.01         | 2.6476 405               | 8.3725 743               | 1.9138 417               | 4.1232 469               | 8.8832 661               | 1.9473 3770                |
| 7.02         | 2.6495 283               | 8.3785 440               | 1.9147 513               | 4.1252 066               | 8.8874 882               | 1.9487 6322                |
| 7.03         | 2.6514 147               | 8.3845 095               | 1.9156 600               | 4.1271 645               | 8.8917 063               | 1.9501 8671                |
| 7.04         | 2.6532 998               | 8.3904 708               | 1.9165 679<br>1.9174 750 | 4.1291 205<br>4.1310 746 | 8.8959 204<br>8.9001 305 | 1.9516 0817<br>1.9530 2762 |
| 7.05<br>7.06 | 2.6551 836<br>2.6570 661 | 8.3964 278<br>8.4023 806 | 1.9183 812               | 4.1330 269               | 8.9043 366               | 1.9544 4505                |
| 7.07         | 2.6589 472               | 8.4083 292               | 1.9192 865               | 4.1349 774               | 8.9085 387               | 1.9558 6048                |
| 7.08         | 2.6608 269               | 8.4142 736               | 1.9201 910               | 4.1369 260               | 8.9127 369               | 1.9572 7391                |
| 7.09         | 2.6627 054               | 8.4202 138               | 1.9210 946               | 4.1388 728               | 8.9169 311               | 1.9586 8534                |
| 7.10         | 2.6645 825               | 8.4261 498               | 1.9219 973               | 4.1408 177               | 8.9211 214               | 1.9600 9478                |
| 7.11         | 2.6664 583               | 8.4320 816               | 1.9228 993               | 4.1427 609               | 8.9253 078               | 1.9615 0224                |
| 7.12<br>7.13 | 2.6683 328<br>2.6702 060 | 8.4380 092<br>8.4439 327 | 1.9238 003<br>1.9247 006 | 4.1447 022<br>4.1466 417 | 8.9294 902<br>8.9336 687 | 1.9629 0773<br>1.9643 1123 |
| 7.14         | 2.6720 778               | 8.4498 521               | 1.9256 000               | 4.1485 794               | 8.9378 433               | 1.9657 1278                |
| 7.15         | 2.6739 484               | 8.4557 673               | 1.9264 985               | 4.1505 153               | 8.9420 140               | 1.9671 1236                |
| 7.16         | 2.6758 176               | 8.4616 783               | 1.9273 962               | 4.1524 493               | 8.9461 809               | 1.9685 0998                |
| 7.17         | 2.6776 856               | 8.4675 853               | 1.9282 931               | 4.1543 816               | 8.9503 438               | 1.9699 0565                |
| 7.18         | 2.6795 522               | 8.4734 881               | 1.9291 892               | 4.1563 121               | 8.9545 029               | 1.9712 9938                |
| 7.19         | 2.6814 175               | 8.4793 868               | 1.9300 844               | 4.1582 407               | 8.9586 581               | 1.9726 9117                |
| 7.20         | 2.6832 816               | 8.4852 814               | 1.9309 788               | 4.1601 676               | 8.9628 095               | 1.9740 8103                |
| 7.21<br>7.22 | 2.6851 443<br>2.6870 058 | 8.4911 719<br>8.4970 583 | 1.9318 723<br>1.9327 651 | 4.1620 928<br>4.1640 161 | 8.9669 570<br>8.9711 007 | 1.9754 6895<br>1.9768 5495 |
| 7.23         | 2.6888 659               | 8.5029 407               | 1.9336 570               | 4.1659 377               | 8.9752 406               | 1.9782 3904                |
| 7.24         | 2.6907 248               | 8.5088 190               | 1.9345 481               | 4.1678 574               | 8.9793 766               | 1.9796 2121                |
| 7.25         | 2.6925 824               | 8.5146 932               | 1.9354 383               | 4.1697 755               | 8.9835 089               | 1.9810 0147                |
| 7.26         | 2.6944 387               | 8.5205 634               | 1.9363 278               | 4.1716 917               | 8.9876 373               | 1.9823 7983                |
| 7.27         | 2.6962 938               | 8.5264 295               | 1.9372 164               | 4.1736 062               | 8.9917 620               | 1.9837 5629                |
| 7.28<br>7.29 | 2.6981 475<br>2.7000 000 | 8.5322 916<br>8.5381 497 | 1.9381 042<br>1.9389 912 | 4.1755 190<br>4.1774 300 | 8.9958 829<br>9.0000 000 | 1.9851 3086<br>1.9865 0355 |
| 7.30         | 2.7018 512               | 8.5440 037               | 1.9398 774               | 4.1793 392               | 9.0041 133               | 1.9878 7435                |
| 7.31         | 2.7037 012               | 8.5498 538               | 1.9407 628               | 4.1812 467               | 9.0082 229               | 1.9892 4327                |
| 7.32         | 2.7055 499               | 8.5556 999               | 1.9416 474               | 4. 1831 525              | 9.0123 288               | 1.9906 1033                |
| 7.33         | 2.7073 973               | 8.5615 419               | 1.9425 311               | 4.1850 565               | 9.0164 309               | 1.9919 7552                |
| 7.34         | 2.7092 434               | 8.5673 800               | 1.9434 141               | 4.1869 588               | 9.0205 293               | 1.9933 3884                |
| 7.35         | 2.7110 883               | 8.5732 141               | 1.9442 963               | 4.1888 594               | 9.0246 239               | 1.9947 0031                |
| 7.36         | 2.7129 320<br>2.7147 744 | 8.5790 442<br>8.5848 704 | 1.9451 777<br>1.9460 582 | 4.1907 582<br>4.1926 553 | 9.0287 149 9.0328 021    | 1.9960 5993<br>1.9974 1771 |
| 7.38         | 2.7166 155               | 8.5906 926               | 1.9469 380               | 4.1926 533               | 9.0368 857               | 1.9987 7364                |
| 7.39         | 2.7184 554               | 8.5965 109               | 1.9478 170               | 4.1964 445               | 9.0409 655               | 2.0001 2773                |
| 7.40         | 2.7202 941               | 8.6023 253               | 1.9486 952               | 4.1983 365               | 9.0450 417               | 2.0014 8000                |
| 7.41         | 2.7221 315               | 8.6081 357               | 1.9495 726               | 4.2002 267               | 9.0491 142               | 2.0028 3044                |
| 7.42         | 2.7239 677               | 8.6139 422               | 1.9504 492               | 4.2021 153               | 9.0531 831               | 2.0041 7906                |
| 7.43         | 2.7258 026               | 8.6197 448               | 1.9513 250               | 4.2040 022               | 9.0572 482               | 2.0055 2586                |
| 7.44         | 2.7276 363<br>2.7294 688 | 8.6255 435<br>8.6313 383 | 1.9522 000<br>1.9530 743 | 4.2058 874<br>4.2077 709 | 9.0613 098<br>9.0653 677 | 2.0068 7085<br>2.0082 1403 |
| 7.46         | 2.7313 001               | 8.6371 292               | 1.9530 743               | 4.2077 709               | 9.0694 220               | 2.0062 1403                |
| 7.47         | 2.7331 301               | 8.6429 162               | 1.9548 204               | 4.2115 329               | 9.0734 726               | 2.0108 9500                |
| 7.48         | 2.7349 589               | 8.6486 993               | 1.9556 923               | 4.2134 114               | 9.0775 197               | 2.0122 3279                |
| 7.49         | 2.7367 864               | 8.6544 786               | 1.9565 635               | 4.2152 882               | 9.0815 631               | 2.0135 6880                |
| 7.50         | 2.7386 128               | 8.6602 540               | 1.9574 338               | 4.2171 633               | 9.0856 030               | 2.0149 0302                |
| eii<br>eiii  | = .0000 002              | .0000 005                | .0000 001                | .0000 002                | .0000 005                | .0000 0024                 |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10N                     | $\sqrt[3]{N}$            | √10N                       | <sup>3</sup> √100 N      | $\log_e N$                 |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|----------------------------|
| 7.50         | 2.7386 128               | 8.6602 540               | 1.9574 338               | 4.2171 633                 | 9.0856 030               | 2.0149 0302                |
| 7.51         | 2.7404 379               | 8.6660 256               | 1.9583 034               | 4.2190 368                 | 9.0896 392               | 2.0162 3547                |
| 7.52         | 2.7422 618               | 8.6717 934               | 1.9591 722               | 4.2209 086                 | 9.0936 719               | 2.0175 6614                |
| 7.53         | 2.7440 845               | 8.6775 573               | 1.9600 403               | 4.2227 787                 | 9.0977 010               | 2.0188 9504                |
| 7.54         | 2.7459 060<br>2.7477 263 | 8.6833 173<br>8.6890 736 | 1.9609 075<br>1.9617 740 | 4.2246 472<br>4.2265 141   | 9.1017 265<br>9.1057 485 | 2.0202 2218<br>2.0215 4756 |
| 7.56         | 2.7495 454               | 8.6948 260               | 1.9626 398               | 4.2283 792                 | 9.1037 463               | 2.0213 4736                |
| 7.57         | 2.7513 633               | 8.7005 747               | 1.9635 048               | 4.2302 428                 | 9.1137 818               | 2.0241 9307                |
| 7.58<br>7.59 | 2.7531 800<br>2.7549 955 | 8.7063 195<br>8.7120 606 | 1.9643 690<br>1.9652 324 | 4.2321 047<br>4.2339 650   | 9.1177 931<br>9.1218 010 | 2.0255 1320<br>2.0268 3159 |
| 7.60         | 2.7568 098               | 8.7177 979               | 1.9660 951               | 4.2358 236                 | 9.1258 053               | 2.0281 4825                |
| 7.61         | 2.7586 228               | 8.7235 314               | 1.9669 571               | 4.2376 806                 | 9.1298 061               | 2.0294 6317                |
| 7.62         | 2.7604 347               | 8.7292 611               | 1.9678 183               | 4.2395 360                 | 9,1338 034               | 2.0307 7637                |
| 7.63         | 2.7622 455               | 8.7349 871               | 1.9686 787               | 4.2413 897                 | 9.1377 971               | 2.0320 8785                |
| 7.64         | 2.7640 550               | 8.7407 094               | 1.9695 384               | 4.2432 419                 | 9.1417 874               | 2.0333 9760                |
| 7.65         | 2.7658 633               | 8.7464 278               | 1.9703 973               | 4.2450 924                 | 9.1457 743               | 2.0347 0565                |
| 7.66         | 2.7676 705               | 8.7521 426               | 1.9712 555               | 4.2469 413                 | 9.1497 576               | 2.0360 1198                |
| 7.67         | 2.7694 765               | 8.7578 536               | 1.9721 130               | 4.2487 886                 | 9.1537 375               | 2.0373 1662                |
| 7.68<br>7.69 | 2.7712 813<br>2.7730 849 | 8.7635 609<br>8.7692 645 | 1.9729 697<br>1.9738 256 | 4.2506 343<br>4.2524 784   | 9.1577 139<br>9.1616 869 | 2.0386 1955<br>2.0399 2078 |
| 7.70         | 2.7748 874               | 8.7749 644               | 1.9746 808               | 4.2543 209                 | 9.1656 565               | 2.0412 2033                |
| 7.71         | 2.7766 887               | 8.7806 606               | 1.9755 353               | 4.2561 618                 | 9.1696 226               | 2.0425 1819                |
| 7.72         | 2.7784 888               | 8.7863 531               | 1.9763 890               | 4.2580 011                 | 9.1735 852               | 2.0438 1436                |
| 7.73         | 2.7802 878               | 8.7920 419               | 1.9772 420               | 4.2598 388                 | 9.1775 445               | 2.0451 0886                |
| 7.74         | 2.7820 855               | 8.7977 270               | 1.9780 943               | 4.2616 749                 | 9.1815 003               | 2.0464 0169                |
| 7.75         | 2.7838 822               | 8.8034 084               | 1.9789 458               | 4.2635 095                 | 9.1854 528               | 2.0476 9284                |
| 7.76         | 2.7856 777               | 8.8090 862               | 1.9797 966               | 4.2653 425                 | 9.1894 018               | 2.0489 8233                |
| 7.77         | 2.7874 720<br>2.7892 651 | 8.8147 603<br>8.8204 308 | 1.9806 467<br>1.9814 960 | 4.2671 739<br>4.2690 037   | 9.1933 474<br>9.1972 897 | 2.0502 7016<br>2.0515 5634 |
| 7.79         | 2.7910 571               | 8.8260 977               | 1.9823 446               | 4.2708 320                 | 9.2012 286               | 2.0528 4086                |
| 7.80         | 2.7928 480               | 8.8317 609               | 1.9831 925               | 4.2726 587                 | 9.2051 641               | 2.0541 2373                |
| 7.81         | 2.7946 377               | 8.8374 204               | 1.9840 396               | 4.2744 838                 | 9.2090 962               | 2.0554 0496                |
| 7.82         | 2.7964 263               | 8.8430 764               | 1.9848 861               | 4.2763 074                 | 9.2130 250               | 2.0566 8455                |
| 7.83         | 2.7982 137               | 8.8487 287               | 1.9857 318               | 4.2781 294                 | 9.2169 505               | 2.0579 6251                |
| 7.84         | 2.8000 000               | 8.8543 774               | 1.9865 768               | 4.2799 499                 | 9.2208 726               | 2.0592 3883                |
| 7.85         | 2.8017 851<br>2.8035 692 | 8.8600 226<br>8.8656 641 | 1.9874 211               | 4.2817 689<br>4.2835 862   | 9.2247 914<br>9.2287 068 | 2.0605 1353<br>2.0617 8661 |
| 7.87         | 2.8053 520               | 8.8713 020               | 1.9891 075               | 4.2854 021                 | 9.2326 189               | 2.0630 5806                |
| 7.88         | 2.8071 338               | 8.8769 364               | 1.9899 496               | 4.2872 164                 | 9.2365 277               | 2.0643 2790                |
| 7.89         | 2.8089 144               | 8.8825 672               | 1.9907 910               | 4.2890 292                 | 9.2404 333               | 2.0655 9613                |
| 7.90         | 2.8106 939               | 8.8881 944               | 1.9916 317               | 4.2908 404                 | 9.2443 355               | 2.0668 6276                |
| 7.91         | 2.8124 722               | 8.8938 181               | 1.9924 717               | 4.2926 501                 | 9.2482 344               | 2.0681 2778                |
| 7.92         | 2.8142 495               | 8.8994 382               | 1.9933 110               | 4.2944 583                 | 9.2521 300               | 2.0693 9121                |
| 7.93         | 2.8160 256               | 8.9050 547               | 1.9941 496               | 4. 2962 650<br>4. 2980 702 | 9.2560 224 9.2599 115    | 2.0706 5304                |
| 7.94         | 2.8178 006<br>2.8195 744 | 8.9106 678<br>8.9162 773 | 1.9949 874<br>1.9958 246 | 4.2980 702                 | 9.2599 115               | 2.0719 1328<br>2.0731 7193 |
| 7.96         | 2.8213 472               | 8.9218 832               | 1.9966 611               | 4.3016 759                 | 9.2676 798               | 2.0744 2900                |
| 7.97         | 2.8231 188               | 8.9274 856               | 1.9974 969               | 4.3034 765                 | 9.2715 592               | 2.0756 8449                |
| 7.98         | 2.8248 894               | 8.9330 846               | 1.9983 319               | 4.3052 757                 | 9.2754 352               | 2.0769 3841                |
| 7.99         | 2.8266 588               | 8.9386 800               | 1.9991 663               | 4.3070 733                 | 9.2793 081               | 2.0781 9076                |
| 8.00         | 2.8284 271               | 8.9442 719               | 2.0000 000               | 4.3088 694                 | 9.2831 777               | 2.0794 4154                |
| Eili         | 0000 002                 |                          |                          | .0000 002                  | .0000 004                | .0000 0021                 |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

|              |                          | r                        |                          |                          |                          | <del>,</del>               |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| N            | $\sqrt{N}$               | √10 <i>N</i>             | ∛₩                       | √10N                     | <sup>3</sup> √100 N      | log N                      |
| 8.00         | 2.8284 271               | 8.9442 719               | 2.0000 000               | 4.3088 694               | 9.2831 777               | 2.0794 4154                |
| 8.01         | 2.8301 943               | 8.9498 603               | 2.0008 330               | 4.3106 640               | 9.2870 440               | 2.0806 9076                |
| 8.02         | 2.8319 605               | 8.9554 453               | 2.0016 653               | 4.3124 571               | 9.2909 072               | 2.0819 3842                |
| 8.03         | 2.8337 255               | 8.9610 267               | 2.0024 969               | 4.3142 487               | 9.2947 672               | 2.0831 8453                |
| 8.04         | 2.8354 894               | 8.9666 047               | 2.0033 278               | 4.3160 389               | 9.2986 239               | 2.0844 2908                |
| 8.05         | 2.8372 522               | 8.9721 792               | 2.0041 580               | 4.3178 276               | 9.3024 775               | 2.0856 7209                |
| 8.06         | 2.8390 139               | 8.9777 503               | 2.0049 876               | 4.3196 147               | 9.3063 278               | 2.0869 1356                |
| 8.07<br>8.08 | 2.8407 745<br>2.8425 341 | 8.9833 179<br>8.9888 820 | 2.0058 164<br>2.0066 446 | 4.3214 004<br>4.3231 847 | 9.3101 750<br>9.3140 190 | 2.0881 5348<br>2.0893 9187 |
| 8.09         | 2.8442 925               | 8.9944 427               | 2.0074 720               | 4.3249 674               | 9.3178 598               | 2.0906 2873                |
| 8.10         | 2.8460 499               | 9.0000 000               | 2.0082 989               | 4.3267 487               | 9.3216 975               | 2.0918 6406                |
| 8.11         | 2.8478 062               | 9.0055 538               | 2.0091 250               | 4.3285 285               | 9.3255 320               | 2.0930 9787                |
| 8.12         | 2.8495 614               | 9.0033 338               | 2.0091 230               | 4.3303 069               | 9.3293 634               | 2.0943 3015                |
| 8.13         | 2.8513 155               | 9.0166 513               | 2.0107 752               | 4.3320 838               | 9.3331 916               | 2.0955 6092                |
| 8.14         | 2.8530 685               | 9.0221 949               | 2.0115 993               | 4.3338 592               | 9.3370 167               | 2.0967 9018                |
| 8.15         | 2.8548 205               | 9.0277 350               | 2.0124 227               | 4,3356 332               | 9.3408 386               | 2.0980 1793                |
| 8.16         | 2.8565 714               | 9.0332 718               | 2.0132 454               | 4.3374 058               | 9.3446 575               | 2.0992 4417                |
| 8.17         | 2.8583 212               | 9.0388 052               | 2.0140 675               | 4.3391 769               | 9.3484 732               | 2.1004 6891                |
| 8.18         | 2.8600 699               | 9.0443 352               | 2.0148 889               | 4.3409 465               | 9.3522 858               | 2.1016 9215                |
| 8.19         | 2.8618 176               | 9.0498 619               | 2.0157 096               | 4.3427 147               | 9.3560 952               | 2.1029 1390                |
| 8.20         | 2.8635 642               | 9.0553 851               | 2.0165 297               | 4.3444 815               | 9.3599 016               | 2.1041 3415                |
| 8.21         | 2.8653 098               | 9.0609 050               | 2.0173 491               | 4.3462 468               | 9.3637 049               | 2.1053 5292                |
| 8.22         | 2.8670 542               | 9.0664 216               | 2.0181 678               | 4.3480 107               | 9.3675 051               | 2.1065 7021                |
| 8.23         | 2.8687 977               | 9.0719 347               | 2.0189 859               | 4.3497 732               | 9.3713 022               | 2.1077 8601                |
| 8.24<br>8.25 | 2.8705 400<br>2.8722 813 | 9.0774 446<br>9.0829 511 | 2.0198 033<br>2.0206 200 | 4.3515 342<br>4.3532 938 | 9.3750 963<br>9.3788 873 | 2.1090 0034<br>2.1102 1320 |
| 8.26         | 2.8740 216               | 9.0884 542               | 2.0200 200               | 4.3550 520               | 9.3826 752               | 2.1102 1320                |
| 8.27         | 2.8757 608               | 9.0939 540               | 2.0222 515               | 4.3568 088               | 9.3864 601               | 2.1126 3451                |
| 8.28         | 2.8774 989               | 9.0994 505               | 2.0230 663               | 4.3585 642               | 9.3902 419               | 2.1120 3431                |
| 8.29         | 2.8792 360               | 9.1049 437               | 2.0238 804               | 4.3603 181               | 9.3940 206               | 2.1150 4997                |
| 8.30         | 2.8809 721               | 9.1104 336               | 2.0246 939               | 4.3620 707               | 9.3977 964               | 2.1162 5551                |
| 8.31         | 2.8827 071               | 9.1159 201               | 2.0255 067               | 4.3638 218               | 9.4015 691               | 2.1174 5961                |
| 8.32         | 2.8844 410               | 9.1214 034               | 2.0263 188               | 4.3655 715               | 9.4053 388               | 2.1186 6225                |
| 8.33         | 2.8861 739               | 9.1268 834               | 2.0271 303               | 4.3673 199               | 9.4091 054               | 2.1198 6346                |
| 8.34         | 2.8879 058               | 9.1323 600               | 2.0279 412               | 4.3690 668               | 9.4128 690               | 2.1210 6322                |
| 8.35         | 2.8896 367               | 9.1378 334               | 2.0287 514               | 4.3708 123               | 9.4166 297               | 2.1222 6154                |
| 8.36         | 2.8913 665               | 9.1433 036               | 2.0295 609               | 4.3725 565               | 9.4203 873               | 2.1234 5843                |
| 8.37         | 2.8930 952               | 9.1487 704               | 2.0303 698               | 4.3742 992               | 9.4241 420               | 2.1246 5388                |
| 8.38<br>8.39 | 2.8948 230<br>2.8965 497 | 9.1542 340<br>9.1596 943 | 2.0311 781<br>2.0319 857 | 4.3760 406<br>4.3777 805 | 9.4278 936<br>9.4316 423 | 2.1258 4791<br>2.1270 4052 |
| 8.40         | 2.8982 753               |                          | 2.0317 037               |                          | <del></del>              | <del></del>                |
|              |                          | 9.1651 514               |                          | 4.3795 191               | 9.4353 880               | 2.1282 3171                |
| 8.41<br>8.42 | 2.9000 000<br>2.9017 236 | 9.1706 052<br>9.1760 558 | 2.0335 991<br>2.0344 048 | 4.3812 564<br>4.3829 922 | 9.4391 307<br>9.4428 704 | 2.1294 2147<br>2.1306 0983 |
| 8.43         | 2.9034 462               | 9.1815 031               | 2.0352 098               | 4.3847 267               | 9.4426 072               | 2.1317 9677                |
| 8.44         | 2.9051 678               | 9.1869 473               | 2.0360 143               | 4.3864 598               | 9.4503 411               | 2.1329 8231                |
| 8.45         | 2.9068 884               | 9.1923 882               | 2.0368 181               | 4.3881 915               | 9.4540 719               | 2.1341 6644                |
| 8.46         | 2.9086 079               | 9.1978 258               | 2.0376 212               | 4.3899 218               | 9.4577 999               | 2.1353 4917                |
| 8.47         | 2.9103 264               | 9.2032 603               | 2.0384 237               | 4.3916 508               | 9.4615 249               | 2.1365 3051                |
| 8.48         | 2.9120 440               | 9.2086 915               | 2.0392 256               | 4.3933 785               | 9.4652 470               | 2.1377 1045                |
| 8 49         | 2.9137 605               | 9.2141 196               | 2.0400 269               | 4.3951 047               | 9.4689 661               | 2.1388 8900                |
| 8.50         | 2.9154 759               | 9.2195 445               | 2.0408 276               | 4.3968 297               | 9.4726 824               | 2.1400 6616                |
| E11          | 0000 001                 | .0000 004                | .0000 001                | .0000 002                | .0000 004                | .0000 0018                 |
|              |                          |                          |                          |                          |                          | L                          |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | 3√ <u>N</u>              | ₹ <u>10N</u>             | <sup>3</sup> √100 N      | log <sub>e</sub> N         |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| 8.50         | 2.9154 759               | 9.2195 445               | 2.0408 276               | 4.3968 297               | 9.4726 824               | 2.1400 6616                |
| 8.51         | 2.9171 904               | 9.2249 661               | 2.0416 276               | 4.3985 532               | 9.4763 957               | 2.1412 4194                |
| 8.52         | 2.9189 039               | 9.2303 846               | 2.0424 269               | 4.4002 755               | 9.4801 061               | 2.1424 1634                |
| 8.53         | 2.9206 164               | 9.2357 999               | 2.0432 257               | 4.4019 963               | 9.4838 136               | 2.1435 8936                |
| 8.54         | 2.9223 278               | 9.2412 120               | 2.0440 238               | 4.4037 159               | 9.4875 182               | 2.1447 6101                |
| 8.55         | 2.9240 383               | 9.2466 210               | 2.0448 214               | 4.4054 341               | 9.4912 200               | 2.1459 3128                |
| 8.56         | 2.9257 478               | 9.2520 268               | 2.0456 182               | 4.4071 509               | 9.4949 188               | 2.1471 0019                |
| 8.57         | 2.9274 562               | 9.2574 294               | 2.0464 145               | 4.4088 664               | 9.4986 148               | 2.1482 6773                |
| 8.58         | 2.9291 637<br>2.9308 702 | 9.2628 289<br>9.2682 253 | 2.0472 102<br>2.0480 052 | 4.4105 806<br>4.4122 934 | 9.5023 078<br>9.5059 981 | 2.1494 3391                |
|              |                          | <del></del>              | ·····                    |                          |                          | 2.1505 9874                |
| 8.60         | 2.9325 757               | 9.2736 185               | 2.0487 996               | 4.4140 050               | 9.5096 854               | 2.1517 6220                |
| 8.61         | 2.9342 802               | 9.2790 086               | 2.0495 934               | 4.4157 152               | 9.5133 699               | 2.1529 2432                |
| 8.62<br>8.63 | 2.9359 837<br>2.9376 862 | 9.2843 955<br>9.2897 793 | 2.0503 866<br>2.0511 792 | 4.4174 240<br>4.4191 316 | 9.5170 516<br>9.5207 304 | 2.1540 8508<br>2.1552 4451 |
| 8.64         | 2.9393 877               | 9.2951 600               | 2.0511 792               | 4.4208 378               | 9.5244 063               | 2.1564 0258                |
| 8.65         | 2.9410 882               | 9.3005 376               | 2.0527 625               | 4.4206 376               | 9.5280 794               | 2.1575 5932                |
| 8.66         | 2.9427 878               | 9.3059 121               | 2.0535 532               | 4.4242 463               | 9.5317 497               | 2.1587 1472                |
| 8.67         | 2.9444 864               | 9.3112 835               | 2.0543 434               | 4.4259 486               | 9.5354 172               | 2.1598 6879                |
| 8.68         | 2.9461 840               | 9.3166 518               | 2.0551 329               | 4.4276 496               | 9.5390 818               | 2.1610 2153                |
| 8.69         | 2.9478 806               | 9.3220 169               | 2.0559 218               | 4.4293 493               | 9.5427 437               | 2.1621 7294                |
| 8.70         | 2.9495 762               | 9.3273 791               | 2.0567 101               | 4.4310 476               | 9.5464 027               | 2.1633 2303                |
| 8.71         | 2.9512 709               | 9.3327 381               | 2.0574 978               | 4.4327 447               | 9.5500 589               | 2.1644 7179                |
| 8.72         | 2.9529 646               | 9.3380 940               | 2.0582 849               | 4.4344 405               | 9.5537 124               | 2.1656 1924                |
| 8.73         | 2.9546 573               | 9.3434 469               | 2.0590 714               | 4.4361 349               | 9.5573 630               | 2.1667 6537                |
| 8.74         | 2.9563 491               | 9.3487 967               | 2.0598 573               | 4. 4378 281              | 9.5610 108               | 2.1679 1019                |
| 8.75<br>8.76 | 2.9580 399<br>2.9597 297 | 9.3541 435               | 2.0606 426<br>2.0614 274 | 4.4395 200<br>4.4412 106 | 9.5646 559<br>9.5682 982 | 2.1690 5370<br>2.1701 9590 |
| 8.77         | 2.9614 186               | 9.3648 278               | 2.0622 115               | 4.4428 999               | 9.5719 377               | 2.1713 3681                |
| 8.78         | 2.9631 065               | 9.3701 654               | 2.0629 950               | 4.4445 880               | 9.5755 745               | 2.1713 3001                |
| 8.79         | 2.9647 934               | 9.3755 000               | 2.0637 779               | 4. 4462 747              | 9.5792 085               | 2.1736 1471                |
| 8.80         | 2.9664 794               | 9.3808 315               | 2.0645 602               | 4.4479 602               | 9.5828 397               | 2.1747 5172                |
| 8.81         | 2.9681 644               | 9.3861 600               | 2.0653 420               | 4.4496 444               | 9.5864 682               | 2.1758 8744                |
| 8.82         | 2.9698 485               | 9.3914 855               | 2.0661 231               | 4.4513 273               | 9.5900 939               | 2.1770 2187                |
| 8.83         | 2.9715 316               | 9.3968 080               | 2.0669 037               | 4.4530 089               | 9.5937 170               | 2.1781 5501                |
| 8.84         | 2.9732 137               | 9.4021 274               | 2.0676 836               | 4.4546 893               | 9.5973 372               | 2.1792 8688                |
| 8.85         | 2.9748 950               | 9.4074 439               | 2.0684 630               | 4.4563 684               | 9.6009 548               | 2.1804 1746                |
| 8.86         | 2.9765 752               | 9.4127 573               | 2.0692 418               | 4.4580 463               | 9.6045 696               | 2.1815 4676                |
| 8.87         | 2.9782 545               | 9.4180 677               | 2.0700 200               | 4.4597 229               | 9.6081 817               | 2.1826 7480                |
| 8.88         | 2.9799 329<br>2.9816 103 | 9.4233 752<br>9.4286 797 | 2.0707 976<br>2.0715 746 | 4.4613 982<br>4.4630 723 | 9.6117 911<br>9.6153 977 | 2.1838 0156<br>2.1849 2705 |
| 8.90         | 2.9832 868               | 9.4339 811               | 2.0723 511               | 4.4647 451               | 9.6190 017               |                            |
|              |                          | <del> </del>             | <del> </del>             | <del> </del>             | <del> </del>             | 2.1860 5128                |
| 8.91<br>8.92 | 2.9849 623<br>2.9866 369 | 9.4392 796<br>9.4445 752 | 2.0731 270<br>2.0739 023 | 4.4664 167<br>4.4680 870 | 9.6226 030<br>9.6262 016 | 2.1871 7424<br>2.1882 9595 |
| 8.93         | 2.9883 106               | 9.4498 677               | 2.0746 770               | 4.4697 560               | 9.6297 975               | 2.1894 1639                |
| 8.94         | 2.9899 833               | 9.4551 573               | 2.0754 511               | 4.4714 239               | 9.6333 907               | 2.1905 3559                |
| 8.95         | 2.9916 551               | 9.4604 440               | 2.0762 247               | 4.4730 904               | 9.6369 812               | 2.1916 5353                |
| 8.96         | 2.9933 259               | 9.4657 277               | 2.0769 976               | 4.4747 558               | 9.6405 691               | 2.1927 7023                |
| 8.97         | 2.9949 958               | 9.4710 084               | 2.0777 700               | 4.4764 199               | 9.6441 542               | 2.1938 8568                |
| 8.98         | 2.9966 648               | 9.4762 862               | 2.0785 419               | 4.4780 827               | 9.6477 368               | 2.1949 9988                |
| 8.99         | 2.9983 329               | 9.4815 611               | 2.0793 131               | 4.4797 444               | 9.6513 166               | 2.1961 1285                |
| 9.00         | 3.0000 000               | 9.4868 330               | 2.0800 838               | 4.4814 047               | 9.6548 938               | 2.1972 2458                |
| Eilt         | = .0000 001<br>=         | .0000 004                | .0000 001                | .0000 002                | .0000 004                | .0000 0016                 |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | ₹ <u>10N</u>             | <sup>3</sup> √100 N                | $\log_e N$                 |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------------|----------------------------|
| 9.00         | 3.0000 000               | 9.4868 330               | 2.0800 838               | 4.4814 047               | 9.6548 938                         | 2.1972 2458                |
| 9.01         | 3.0016 662               | 9.4921 020               | 2.0808 539               | 4.4830 639               | 9.6584 684                         | 2.1983 3507                |
| 9.02         | 3.0033 315               | 9.4973 681               | 2.0816 235               | 4.4847 218               | 9.6620 403                         | 2.1994 4433                |
| 9.03         | 3.0049 958               | 9.5026 312               | 2.0823 925               | 4.4863 786               | 9.6656 096                         | 2.2005 5237                |
| 9.04         | 3.0066 593<br>3.0083 218 | 9.5078 915<br>9.5131 488 | 2.0831 609<br>2.0839 287 | 4.4880 341<br>4.4896 883 | 9.6691 763<br>9.6727 403           | 2.2016 5917<br>2.2027 6476 |
| 9.06         | 3.0099 834               | 9.5184 032               | 2.0846 960               | 4.4913 414               | 9.6763 017                         | 2.2038 6912                |
| 9.07         | 3.0116 441               | 9.5236 548               | 2.0854 627               | 4.4929 932               | 9.6798 604                         | 2.2049 7226                |
| 9.08         | 3.0133 038               | 9.5289 034               | 2.0862 289               | 4.4946 438               | 9.6834 166                         | 2.2060 7419                |
| 9.09         | 3.0149 627               | 9.5341 491               | 2.0869 945               | 4.4962 932               | 9.6869 701                         | 2.2071 7491                |
| 9.10         | 3.0166 206               | 9.5393 920               | 2.0877 595               | 4.4979 414               | 9.6905 211                         | 2.2082 7441                |
| 9.11         | 3.0182 777               | 9.5446 320               | 2.0885 239               | 4.4995 884               | 9.6940 694                         | 2.2093 7271                |
| 9.12<br>9.13 | 3.0199 338<br>3.0215 890 | 9.5498 691<br>9.5551 033 | 2.0892 879<br>2.0900 512 | 4.5012 342<br>4.5028 788 | 9.6976 152<br>9.7011 583           | 2.2104 6980<br>2.2115 6569 |
| 9.14         | 3.0232 433               | 9.5603 347               | 2.0908 140               | 4.5045 222               | 9.7046 989                         | 2.2126 6039                |
| 9.15         | 3.0248 967               | 9.5655 632               | 2.0915 762               | 4.5061 644               | 9.7082 369                         | 2.2137 5388                |
| 9.16         | 3.0265 492               | 9.5707 889               | 2.0923 379               | 4.5078 054               | 9.7117 723                         | 2.2148 4618                |
| 9.17         | 3.0282 008               | 9.5760 117               | 2.0930 990               | 4.5094 452               | 9.7153 051                         | 2.2159 3729                |
| 9.18<br>9.19 | 3.0298 515<br>3.0315 013 | 9.5812 317<br>9.5864 488 | 2.0938 596<br>2.0946 196 | 4.5110 838<br>4.5127 212 | 9.71 <del>8</del> 8 354 9.7223 631 | 2.2170 2720<br>2.2181 1594 |
| 9.20         | 3.0331 502               | 9.5916 630               | 2.0953 791               | 4.5127 212               | 9.7258 883                         | 2.2192 0348                |
| 9.21         | 3.0347 982               | 9.5968 745               | 2.0961 380               | 4.5159 925               | 9.7294 109                         | 2.2202 8985                |
| 9.22         | 3.0364 453               | 9.6020 831               | 2.0968 964               | 4.5176 263               | 9.7329 309                         | 2.2213 7504                |
| 9.23         | 3.0380 915               | 9.6072 889               | 2.0976 542               | 4.5192 590               | 9.7364 484                         | 2.2224 5905                |
| 9.24         | 3.0397 368               | 9.6124 919               | 2.0984 115               | 4.5208 905               | 9.7399 634                         | 2.2235 4189                |
| 9.25<br>9.26 | 3.0413 813<br>3.0430 248 | 9.6176 920<br>9.6228 894 | 2.0991 682<br>2.0999 244 | 4.5225 208<br>4.5241 500 | 9.7434 758<br>9.7469 857           | 2.2246 2355                |
|              |                          |                          |                          |                          | 9.7504 931                         | 2.2257 0405                |
| 9.27<br>9.28 | 3.0446 675<br>3.0463 092 | 9.6280 839<br>9.6332 757 | 2.1006 801<br>2.1014 351 | 4.5257 780<br>4.5274 048 | 9.7539 979                         | 2.2267 8338<br>2.2278 6155 |
| 9.29         | 3.0479 501               | 9.6384 646               | 2.1021 897               | 4.5290 304               | 9.7575 003                         | 2.2289 3855                |
| 9.30         | 3.0495 901               | 9.6436 508               | 2.1029 437               | 4.5306 549               | 9.7610 001                         | 2.2300 1440                |
| 9.31         | 3.0512 293               | 9.6488 341               | 2.1036 972               | 4.5322 782               | 9.7644 974                         | 2.2310 8909                |
| 9.32         | 3.0528 675               | 9.6540 147               | 2.1044 501               | 4.5339 004               | 9.7679 922                         | 2.2321 6263                |
| 9.33         | 3.0545 049<br>3.0561 414 | 9.6591 925<br>9.6643 675 | 2.1052 025<br>2.1059 544 | 4.5355 213<br>4.5371 412 | 9.7714 845                         | 2.2332 3501                |
| 9.34         | 3.0577 770               | 9.6695 398               | 2.1059 544               | 4.5387 598               | 9.7784 617                         | 2.2343 0625<br>2.2353 7634 |
| 9.36         | 3.0594 117               | 9.6747 093               | 2.1074 565               | 4.5403 774               | 9.7819 465                         | 2.2364 4529                |
| 9.37         | 3.0610 456               | 9.6798 760               | 2.1082 067               | 4.5419 937               | 9.7854 289                         | 2.2375 1310                |
| 9.38         | 3.0626 786               | 9.6850 400               | 2.1089 565               | 4.5436 089               | 9.7889 087                         | 2.2385 7976                |
| 9.39         | 3.0643 107               | 9.6902 012               | 2.1097 056               | 4.5452 230               | 9.7923 861                         | 2.2396 4529                |
| 9.40         | 3.0659 419               | 9.6953 597               | 2.1104 543               | 4.5468 359               | 9.7958 611                         | 2.2407 0969                |
| 9.41 9.42    | 3.0675 723<br>3.0692 019 | 9.7005 155<br>9.7056 684 | 2.1112 024<br>2.1119 500 | 4.5484 477<br>4.5500 584 | 9.7993 336 9.8028 036              | 2.2417 7295<br>2.2428 3509 |
| 9.43         | 3.0708 305               | 9.7108 187               | 2.1119 300               | 4.5516 679               | 9.8062 711                         | 2.2428 3309                |
| 9.44         | 3.0724 583               | 9.7159 662               | 2.1134 436               | 4.5532 762               | 9.8097 363                         | 2.2449 5598                |
| 9.45         | 3.0740 852               | 9.7211 110               | 2.1141 896               | 4.5548 835               | 9.8131 989                         | 2.2460 1474                |
| 9.46         | 3.0757 113               | 9.7262 531               | 2.1149 351               | 4.5564 896               | 9.8166 592                         | 2.2470 7238                |
| 9.47         | 3.0773 365               | 9.7313 925               | 2.1156 801               | 4.5580 945               | 9.8201 169                         | 2.2481 2891                |
| 9.48         | 3.0789 609<br>3.0805 844 | 9.7365 292<br>9.7416 631 | 2.1164 245<br>2.1171 684 | 4.5596 983<br>4.5613 011 | 9.8235 723<br>9.8270 252           | 2.2491 8432<br>2.2502 3861 |
| 9.50         | 3.0822 070               | 9.7467 943               | 2.1179 118               | 4.5629 026               | 9.8304 757                         | 2.2512 9180                |
|              | = .0000 001              | .0000 003                | .0000 001                | .0000 001                | .0000 003                          | .0000 0015                 |
| Eil1         | <u> </u>                 | L                        | L                        | L                        | <u> </u>                           | <u> </u>                   |

TABLE VII. SQUARE AND CUBE ROOTS AND NATURAL LOGARITHMS

| N            | $\sqrt{N}$               | √10 <i>N</i>             | $\sqrt[3]{N}$            | ₹ <u>10N</u>             | <sup>3</sup> √100 N                              | $\log_e N$                 |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--|----------------------------|
| 9.50         | 3.0822 070               | 9.7467 943               | 2.1179 118               | 4.5629 026               | 9.8304 757                                       | 2.2512 9180                |
| 9.51         | 3.0838 288               | 9.7519 229               | 2.1186 547               | 4.5645 031               | 9.8339 238                                       | 2.2523 4388                |
| 9.52         | 3.0854 497               | 9.7570 487               | 2.1193 970               | 4.5661 024               | 9.8373 695                                       | 2.2533 9485                |
| 9.53         | 3.0870 698               | 9.7621 719               | 2.1201 388               | 4.5677 006               | 9.8408 127                                       | 2.2544 4472                |
| 9.54<br>9.55 | 3.0886 890<br>3.0903 074 | 9.7672 924<br>9.7724 101 | 2.1208 801               | 4.5692 977               | 9.8442 536                                       | 2.2554 9349                |
| 9.56         | 3.0919 250               | 9.7775 252               | 2.1216 209<br>2.1223 612 | 4.5708 937<br>4.5724 886 | 9.8476 920<br>9.8511 280                         | 2.2565 4115<br>2.2575 8773 |
| 9.57         | 3.0935 417               | 9.7826 377               | 2.1231 010               | 4.5740 823               | 9.8545 617                                       | 2.2586 3321                |
| 9.58         | 3.0951 575               | 9.7877 474               | 2.1238 402               | 4. 5756 750              | 9.8579 929                                       | 2.2596 7759                |
| 9.59         | 3.0967 725               | 9.7928 545               | 2.1245 789               | 4.5772 665               | 9.8614 218                                       | 2.2607 2089                |
| 9.60         | 3.0983 867               | 9.7979 590               | 2.1253 171               | 4.5788 570               | 9.8648 483                                       | 2.2617 6310                |
| 9.61         | 3.1000 000               | 9.8030 607               | 2.1260 548               | 4.5804 463               | 9.8682 724                                       | 2.2628 0422                |
| 9.62         | 3.1016 125               | 9.8081 599               | 2.1267 920               | 4.5820 345               | 9.8716 941                                       | 2.2638 4426                |
| 9.63         | 3.1032 241               | 9.8132 563               | 2.1275 287               | 4.5836 217               | 9.8751 135                                       | 2.2648 8323                |
| 9.64<br>9.65 | 3.1048 349<br>3.1064 449 | 9.8183 502<br>9.8234 414 | 2.1282 649<br>2.1290 005 | 4.5852 077<br>4.5867 926 | 9.8785 305<br>9.8819 451                         | 2.2659 2111<br>2.2669 5792 |
| 9.66         | 3.1080 541               | 9.8285 299               | 2.1297 357               | 4.5883 765               | 9.8853 574                                       | 2.2679 9365                |
| 9.67         | 3.1096 624               | 9.8336 158               | 2.1304 703               | 4.5899 592               | 9.8887 673                                       | 2.2690 2831                |
| 9.68         | 3.1112 698               | 9.8386 991               | 2.1312 045               | 4.5912 408               | 9.8921 749                                       | 2.2700 6190                |
| 9.69         | 3.1128 765               | 9.8437 798               | 2.1319 381               | 4.5931 214               | 9.8955 801                                       | 2.2710 9443                |
| 9.70         | 3.1144 823               | 9.8488 578               | 2.1326 712               | 4.5947 009               | 9.8989 830                                       | 2.2721 2589                |
| 9.71         | 3.1160 873               | 9.8539 332               | 2.1334 039               | 4.5962 793               | 9.9023 835                                       | 2.2731 5628                |
| 9.72<br>9.73 | 3.1176 915<br>3.1192 948 | 9.8590 060<br>9.8640 762 | 2.1341 360<br>2.1348 676 | 4.5978 566<br>4.5994 328 | 9.9057 817 9.9091 776                            | 2.2741 8562<br>2.2752 1390 |
| 9.74         | 3.1208 973               | 9.8691 438               | 2.1355 987               | 4.6010 080               | 9.9125 712                                       | 2.2762 4112                |
| 9.75         | 3.1224 990               | 9.8742 088               | 2.1363 293               | 4.6025 320               | 9.9159 624                                       | 2.2772 6729                |
| 9.76         | 3.1240 999               | 9.8792 712               | 2.1370 595               | 4.6041 550               | 9.9193 513                                       | 2.2782 9240                |
| 9.77         | 3.1256 999               | 9.8843 310               | 2.1377 891               | 4.6057 270               | 9.9227 379                                       | 2.2793 1647                |
| 9.78         | 3.1272 992               | 9.8893 883               | 2.1385 182               | 4.6072 978               | 9.9261 222                                       | 2.2803 3948                |
| 9.79         | 3.1288 976               | 9.8944 429               | 2.1392 468               | 4.6088 676               | 9.9295 042                                       | 2.2813 6146                |
| 9.80         | 3.1304 952               | 9.8994 949               | 2.1399 750               | 4.6104 363               | 9.9328 839                                       | 2.2823 8239                |
| 9.81         | 3.1320 920               | 9.9045 444               | 2.1407 026               | 4.6120 039               | 9.9362 613                                       | 2.2834 0227<br>2.2844 2112 |
| 9.82         | 3.1336 879<br>3.1352 831 | 9.9095 913<br>9.9146 356 | 2.1414 297<br>2.1421 564 | 4.6135 705<br>4.6151 360 | 9.9396 364 9.9430 092                            | 2.2854 3893                |
| 9.84         | 3.1368 774               | 9.9196 774               | 2.1428 825               | 4.6167 005               | 9.9463 797                                       | 2.2864 5571                |
| 9.85         | 3.1384 710               | 9.9247 166               | 2.1436 082               | 4.6182 639               | 9.9497 479                                       | 2.2874 7146                |
| 9.86         | 3.1400 637               | 9.9297 533               | 2.1443 334               | 4.6198 262               | 9.9531 138                                       | 2.2884 8617                |
| 9.87         | 3.1416 556               | 9.9347 874               | 2.1450 581               | 4.6213 875               | 9.9564 775                                       | 2.2894 9985                |
| 9.88         | 3.1432 467<br>3.1448 370 | 9.9398 189<br>9.9448 479 | 2.1457 822<br>2.1465 060 | 4.6229 477               | 9.9598 389<br>9.9631 981                         | 2.2905 1251<br>2.2915 2415 |
| ļ            |                          | <del> </del>             |                          | <del></del>              | <del>                                     </del> | <del> </del>               |
| 9.90         | 3.1464 265               | 9.9498 744               | 2.1472 292<br>2.1479 519 | 4.6260 650               | 9.9665 549                                       | 2.2925 3476                |
| 9.91 9.92    | 3.1480 152<br>3.1496 031 | 9.9548 983               | 2.1479 519<br>2.1486 741 | 4.6276 221<br>4.6291 781 | 9.9699 095<br>9.9732 619                         | 2.2935 4435<br>2.2945 5292 |
| 9.93         | 3.1511 903               | 9.9649 385               | 2.1493 959               | 4.6307 331               | 9.9766 120                                       | 2.2955 6048                |
| 9.94         | 3.1527 766               | 9.9699 549               | 2.1501 172               | 4.6322 870               | 9.9799 599                                       | 2.2965 6702                |
| 9.95         | 3.1543 621               | 9.9749 687               | 2.1508 380               | 4.6338 399               | 9.9833 055                                       | 2.2975 7255                |
| 9.96         | 3.1559 468               | 9.9799 800               | 2.1515 583               | 4.6353 918               | 9.9866 489                                       | 2.2985 7707                |
| 9.97         | 3.1575 307               | 9.9849 887               | 2.1522 781               | 4.6369 426               | 9.9899 900                                       | 2.2995 8058                |
| 9.98         | 3.1591 138<br>3.1606 961 | 9.9899 950<br>9.9949 987 | 2.1529 974<br>2.1537 163 | 4.6384 924<br>4.6400 411 | 9.9933 289<br>9.9966 656                         | 2.3005 8309<br>2.3015 8459 |
| 10.00        |                          | 10.0000 000              | 2.1544 347               | 4.6415 888               | 10.0000 000                                      | 2.3013 8439                |
|              | = .0000 001              | .0000 003                | .0000 001                | .0000 001                | .0000 003  | .0000 0013                 |
| Eili         | E                        | <u> </u>                 | L                        | 1                        | 1  |                            |

TABLE VIII Table of  $\theta$  Values

| i                    | $	heta_{f i}$                                    | i                    | $	heta_{f i}$                                    | i                           | $	heta_{f i}$                                    |
|----------------------|--|----------------------|--|-----------------------------|--|
| 1                    | 1.6499158  | 43                   | 2.1103574  | 85                          | 2.1157744  |
| 2                    | 1.8856181  | 44                   | 2.1106066  | 86                          | 2.1158389  |
| 3                    | 1.9641855  | 45                   | 2.1108447  | 87                          | 2.1159019  |
| <b>4 5 6</b>         | 2.0034692  | 46                   | 2.1110724  | 88                          | 2.1159635  |
|                      | 2.0270394  | 47                   | 2.1112905  | 89                          | 2.1160237  |
|                      | 2.0427529  | 48                   | 2.1114994  | 90                          | 2.1160825  |
| 7<br>8<br>9          | 2.0539768<br>2.0623948<br>2.0689421              | 49<br>50<br>51       | 2.1116998<br>2.1118923<br>2.1120771              | 91<br>92<br>93<br>94        | 2.1161401<br>2.1161964<br>2.1162515<br>2.1163054 |
| 10                   | 2.0741799  | 52                   | 2.1122549  | 94                          | 2.1163034  |
| 11                   | 2.0784654  | 53                   | 2.1124259  | 95                          | 2.1163582  |
| 12                   | 2.0820366  | 54                   | 2.1125906  | 96                          | 2.1164099  |
| 13                   | 2.0850585  | 55                   | 2.1127494  | 97                          | 2.1164605  |
| 14                   | 2.0876488  | 56                   | 2.1129024  | 98                          | 2.1165101  |
| 15                   | 2.0898934  | 57                   | 2.1130501  | 99                          | 2.1165587  |
| 16                   | 2.0918576  | 58                   | 2.1131927  | 100                         | 2.1166063  |
| 17                   | 2.0935907  | 59                   | 2.1133304  | 110                         | 2.1170348  |
| 18                   | 2.0951312  | 60                   | 2.1134636  | 120                         | 2.1173920  |
| 19                   | 2.0965096  | 61                   | 2.1135924  | 130                         | 2.1176942  |
| 20                   | 2.0977481  | 62                   | 2.1137170  | 140                         | 2.1179532  |
| 21                   | 2.0988725  | 63                   | 2.1138377  | 150                         | 2.1181776  |
| 22                   | 2.0998929  | 64                   | 2.1139546  | 160                         | 2.1183741  |
| 23                   | 2.1008245  | 65                   | 2.1140680  | 170                         | 2.1185474  |
| 24                   | 2.1016785  | 66                   | 2.1141779  | 180                         | 2.1187014  |
| 25                   | 2.1024642  | 67                   | 2.1142845  | 190                         | 2.1188393  |
| 26                   | 2.1031894  | 68                   | 2.1143879  | 200                         | 2.1189633  |
| 27                   | 2.1038609  | 69                   | 2.1144884  | 220                         | 2.1191776  |
| 28                   | 2.1044845  | 70                   | 2.1145860  | 240                         | 2.1193562  |
| 29                   | 2.1050650  | 71                   | 2.1146808  | 260                         | 2.1195072  |
| 30                   | 2.1056069  | 72                   | 2.1147731  | 280                         | 2.1196368  |
| 31<br>32<br>33       | 2.1061137<br>2.1065890<br>2.1070354              | 73<br>74<br>75<br>76 | 2.1148627<br>2.1149500<br>2.1150350<br>2.1151177 | 300<br>350<br>400<br>450    | 2.1197490<br>2.1199735<br>2.1201418<br>2.1202728 |
| 34<br>35<br>36<br>37 | 2.1074555<br>2.1078516<br>2.1082258<br>2.1085797 | 77<br>78<br>79       | 2.115177<br>2.1151982<br>2.1152767<br>2.1153532  | 500<br>600<br>700           | 2.1203775<br>2.1205347<br>2.1206469              |
| 38<br>39<br>40       | 2.1089150<br>2.1092330<br>2.1095352              | 80<br>81<br>82<br>83 | 2.1154278<br>2.1155005<br>2.1155715<br>2.1156408 | 800<br>900<br>1000<br>10000 | 2.1207311<br>2.1207966<br>2.1208489<br>2.1212732 |
| 41<br>42             | 2.1098227<br>2.1100964                           | 84                   | 2.1157084  | ω                           | 2.1213203  |

## TABLE IX Constants Frequently Needed

|                   |           |       | Constant | s frequently         | Neede | ed    |          |        |        |
|-------------------|-----------|-------|----------|----------------------|-------|-------|----------|--------|--------|
|                   |           |       |          | Logarithms           | to ba | se 10 | Logarit  | hms to | base e |
| 2                 | 2.00000   | 00000 | 00000    | 0.30102              | 99956 | 63981 | . 69314  | 71805  | 59945  |
| $\sqrt{2}$        | 1.41421   | 35623 | 73095    | 0.15051              | 49978 | 31991 | . 3465 7 | 35902  | 79973  |
| $1/\sqrt{2}$      | .70710    | 67811 | 86548    |                      |       |       |          |        |        |
| <b>₹</b> 2        | 1.25992   | 10498 | 94873    | .10034               | 33318 | 87994 | .23104   | 90601  | 86648  |
| 10                | 10.00000  | 00000 | 00000    | 1.00000              | 00000 | 00000 | 2.30258  | 50929  | 94046  |
| $\sqrt{10}$       | 3.16227   | 76601 | 68379    | .50000               | 00000 | 00000 | 1.15129  | 25464  | 97023  |
| $\sqrt[3]{10}$    | 2.15443   | 46900 | 31884    | . 33333              | 33333 | 33333 | .76752   | 83643  | 31349  |
| 100               | 100.00000 | 00000 | 00000    | 2.00000              | 00000 | 00000 | 4.60517  | 01859  | 88091  |
| $\sqrt[3]{100}$   | 4.64158   | 88336 | 12779    | .66666               | 66666 | 66667 | 1.53505  | 67286  | 62697  |
| π                 | 3.14159   | 26535 | 89793    | 0.49714              | 98726 | 94134 | 1.14472  | 98858  | 49400  |
| 1/π               | .31830    | 98861 | 83791    |                      |       |       |          |        |        |
| $\sqrt{\pi}$      | 1.77245   | 38509 | 05516    | 0.24857              | 49363 | 47067 | .57236   | 49429  | 24700  |
| $1/\sqrt{\pi}$    | .56418    | 95835 | 47756    |                      |       |       |          |        |        |
| $\sqrt{2\pi}$     | 2.50662   | 82746 | 31001    | 0.39908              | 99341 | 79058 | .91893   | 85332  | 04673  |
| $1/\sqrt{2\pi}$   | .39894    | 22804 | 01433    |                      | ,     |       |          |        |        |
| $\pi^2$           | 9.86960   | 44010 | 89359    | .99429               | 97453 | 88268 | 2.28945  | 97716  | 98800  |
| 180               | 180.00000 | 00000 | 00000    | 2.25527              | 25051 | 03306 | 5.19295  | 68508  | 90210  |
| $\frac{\pi}{180}$ | 0°01745   | 32925 | 19943    | $\overline{2}.24187$ | 73675 | 90828 | -4.04822 | 69650  | 40810  |
| $\frac{180}{\pi}$ | 57.29577  | 95130 | 82321    |                      |       |       |          |        |        |
| e                 | 2.71828   | 18284 | 59045    |                      |       | 03252 | 1.00000  | 00000  | 00000  |
| l/e               | .36787    | 94411 | 71442    | the modi             | ilus  |       |          |        |        |
| √e                | 1.64872   | 12707 | 00128    | 0.21714              | 72409 | 51626 | .50000   | 00000  | 00000  |
| l/√e              | .60653    | 06597 | 12633    |                      |       |       |          |        |        |
| e 2·              | 7.38905   | 60989 | 30650    | 0.86858              | 89638 | 06504 | 2.00000  | 00000  | 00000  |
| $l/e^2$           | .13533    | 52832 | 36613    |                      |       |       |          |        |        |
| the<br>modulus    | . 43429   | 44819 | 03252    | $\overline{1}.63778$ | 43113 | 00537 |          |        |        |
| Euler's           | .57721    | 56649 | 01533    | $\bar{1}.76133$      | 81087 | 83168 | -0.54953 | 93129  | 81645  |